

# **Ndwedwe District Child Survival Project KwaZulu Natal, South Africa**

## **DETAILED IMPLEMENTATION PLAN**



**Cooperative Agreement No. FAO A-00-97-00025-00  
Program Period: October 1, 2001-September 30, 2005**

**Submitted April 25, 2002**

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## List of Abbreviations

AIDS	Acquired Immuno Deficiency Syndrome
BCC	Behavior Change Communication
CDD	Control of Diarrheal Diseases
CHC	Community Health Committee
CHW	Community Health Worker
CMR	Child Mortality Rate
CS	Child Survival
DHM	District Health Manager
DHS	Demographic and Health Survey
DHIS	District Health Information System
DHSMT	District Health System Management Team
DIP	Detailed Implementation Plan
DOH	Department of Health
DOSA	Discussion-Oriented Organizational Self-Assessment
EOC	Emergency Obstetric Care
EOP	End of Program
GPS	Geographic Positioning System
HBCV	Home-Based Care Volunteer
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HO	Home Office
HRD	Human Resources Development
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
KZN	KwaZulu-Natal
KPC	Knowledge, Practices and Coverage (Survey)
LOE	Level of Effort
MCDI	Medical Care Development International
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
NDCSP	Ndwedwe District Child Survival Program
NGO	Non-Governmental Organization
NPPHCN	National Progressive Primary Health Care Network
OCA	Organizational Capacity Assessment
ORS	Oral Rehydration Solution/Salts
ORT	Oral Rehydration Therapy
OVC	Orphans and Vulnerable Children
PATH	Program for Appropriate Technology in Health
PEP	Perinatal Education Program
PHC	Primary Health Care
PLA	Participatory Learning Activities
PLWA	People Living with AIDS
PLWHA	People Living with HIV/AIDS

QRI	Quarterly Reporting Instrument
RTH	Road to Health
STI	Sexually Transmitted Infections
TA	Traditional Authority (Tribal Authority)
TBA	Traditional Birth Attendant
TC	Training Coordinator
TREE	Training and Resources for Early Education
TOT	Training of Trainers
TT	Tenatus Toxiod
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WRA	Women of Reproductive Age

## **Section I: Program Description**

## A. Executive Summary

With this cost-extension, the Ndwedwe Child Survival Project (NDCSP) begins its second four-year phase in an extended area of the Ndwedwe Sub-District in the KwaZulu Natal Province of South Africa. The second phase (Phase II) Project will include the original (Phase I) Project area and an extension area to the north that comprises three additional clinic catchments (Chibini, Kearsny, and Isidumbini clinics) and one additional hospital (Applesbosch Hospital).

**Problem Statement:** The primary problems that present barriers to improving maternal and child health in Ndwedwe are the fragmentation of services and administrative systems and the rapidly escalating HIV/AIDS epidemic of emergency proportions. In addition, many problems that became established in the Project area during the apartheid era – poverty, migrant labor, poor nutrition and sanitation, etc. – have proven difficult to eradicate, and so the prevalence of traditional causes of childhood morbidity and mortality (particularly diarrhea, dysentery, and pneumonia) continues to be high. The NDCSP has been active in assisting the Department of Health (DOH) create a District Health System for Ndwedwe and introduce and pilot-test new, more efficient and equitable health care alternatives to integrate the delivery of services (i.e, IMCI). During Phase II, the NDCSP will work to ensure that management and clinical skills are adequate to sustain these new mandates, and that communities are fully integrated into this process.

The estimated number of beneficiaries in the extended Project area is 67,721, comprised of 18,648 children under five and 49,073 women of reproductive age. The goal of the NDCSP is unchanged in Phase II: **To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age (WRA).** To reach this goal, the project will focus on several key interventions: HIV/AIDS/STIs (LOE 30%), Control of Diarrheal Diseases (LOE 20%), Immunizations (LOE 20%), Pneumonia Case Management (LOE 15%) and Maternal/Newborn Care (LOE 15%). The Phase II results-based objectives for the principal interventions are as follows: **HIV/AIDS/STIs:** 1) 65% of mothers will be aware of at least three symptoms of STIs other than HIV/AIDS in females; 2) Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%; 3) 90% of mothers will be able to recognize at least two known ways in which a mother can transmit HIV/AIDS to her child; 4) 90% of women will be willing to allow children under their care to play with an HIV-positive child; 5) 100% of the appropriate health facilities in the project area will provide HIV/AIDS/STIs prenatal screening and counseling; 6) 75% of households caring for orphaned and vulnerable children (OVCs) will be aware of and know how to access Department of Social Welfare (DSW) grants and services; 7) 85% of high school students in which School Health Clubs (SHCs) are active have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention; 8) 60% of high school students with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use); 9) 90% of high school students in which SHCs are active have adequate knowledge of the care of family members with AIDS; 10) 50% of facilities provide Nevirapine to AIDS-infected mothers according to protocols. **Control of Diarrheal Diseases:** 1) 90% of mothers and non-maternal caregivers will provide oral rehydration solution (ORS) to the child under their care during diarrheal episodes; 2) 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care; 3) 85% of mothers and caregivers will give the same of or more liquids than usual during diarrhea episodes. **Pneumonia Case Management:** 1) 25% of mothers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of symptoms; 2) IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the Project clinics. **Immunization:** 1) 70% of children aged 12-23 months are fully immunized per RTH card; 2) 80% of children aged 12-23 months have received a measles vaccination per RTH card.

**Maternal/Newborn Care:** 1) At least 60% of mothers will be aware of three or more of the danger signs in newborns that require immediate treatment; 2) 40% of CHCs will have established a community-based health fund to cover health needs designated as priorities by the community such as transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc; 3) During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter; 4) 80% of midwives in Project area health facilities will be trained in the PEP modules.

**Major Strategies:** The Project's multi-faceted training program includes management and organizational strengthening for the District Health System Management Team (DHSMT), facility-based training in maternal and HIV/AIDS counseling skills, the effective implementation and supervision of the new IMCI protocol, and in mounting an effective BCC campaign, based on the BEHAVE Framework. These strategies were determined based on an in-depth knowledge of the Project environment gained during four years of project implementation preceded by a two-year planning grant period. Additional knowledge has been gained through several quantitative and qualitative studies, including the baseline 2001 KPC. MCDI will continue to implement the DOH's IMCI-adapted protocols, and to support activities that will foster a strong and sustainable district health system. MCDI is also pilot testing several initiatives, with support from USAID/Pretoria, to attack the HIV/AIDS epidemic and reduce its impact, including the introduction of rapid testing for STIs and HIV. In addition, MCDI's traditional focus on mothers of children under five will be broadened to include non-maternal caregivers, who gave evidence of significantly lower health knowledge and less optimal childcare practices in the project's KPC 2000 survey.

**Local Partners:** The project will continue its collaboration with a number of both local and international partner organizations, particularly to build their capacity. Key partners include the District Health System Management Team, Oakford Clinic, TREE, DramAidE, the Diakonia Council of Churches, and Sinisizo, and strong and sustainable community institutions such as Community Health Committees (CHCs) and the Home Based Care Volunteers (HBCVs). The NDCSP will facilitate the organization of new CHCs, assist them to undertake periodic community health assessments, improve their management practices, and build their BCC capabilities by providing them with up-to-date health information and teaching them effective communication skills. The HBVCs, who have already received basic training with NDCSP support, will receive additional and refresher training as indicated by the planned training needs assessment, in order to establish them as a resource to households affected by HIV/AIDS.

The category of the original CS GP application was cost extension. This grant (Phase II) began October 1, 2001, will end Sept. 30, 2005, and is a follow on to a previous child survival grant (October 1997 – September 2001). The total amount of funding received to implement this cost-extension Project is \$1,194,824.00. This Project has been discussed with John Crowley, the senior HPN officer at USAID/Pretoria. USAID/Pretoria has been an active supporter of the NDCSP and provided supplementary funding to initiate the Project's HIV/AIDS component in the second half of Phase I. The main authors of this document were Farshid Meidany, Project Manager, Dennis Cherian, Senior Project Officer, Alyssa Wigton, Senior Project Officer, Joseph Carter, Director of MCDI's International Division, and Barbara Parker, Consultant. The MCDI contact person is Joseph Carter.

## **B. CS GP Data Form**

Please see overleaf.

## C. Description of the DIP Preparation Process

Design of this Phase II project included involvement of NDCSP project staff, key local project partners, as well as MCDI Home office staff. In addition, the input of several external consultants, including the Phase I project's Final Evaluator, has been incorporated into this document. Within the DOH, the Project Manager has consulted both key personnel at the district and provincial level, including the District Health Manager, the Regional AIDS Coordinator, the Provincial IMCI Manager, the Provincial MCH Coordinator, the Assistant Regional Director for Adolescent & Child Health, the Assistant Regional Director for EPI/IMCI, the Provincial Chief Pharmacist, the District Municipal Manager, and the Regional Health Information Manager.

In addition, in-depth interviews were conducted with health facility staff, including the Ndwedwe Community Health Centre Matron, the Medical Superintendent and Matron at Osindisweni Hospital, the Deputy Matron at Qadi Clinic, and the Sister in Charge at Oakford Priory Clinic. The project has also learned of the need to expand additional activities at the community level. In addition, project staff met with the traditional leaders (Amakosi) of the District prior to the conduct of the Baseline Survey, in order to discuss the project and to obtain their input on the needs of the District.

Finally, input has been obtained from the NDCSP's partners at the community level, for example, the Director of Valley Trust, the Manager of TREE, the Director of DramAIDE, the Programme Manager of Diakonia, the AIDS Network Coordinator at Diakonia, a Consultant at the Natal University Centre for Rural Development, a representative of the Provincial Interfaith AIDS Forum, a representative of the Natal University Institute of Virology, and staff from Doctors for Life. These conversations led to the plan for the project's new collaborations with traditional healers during Phase II. Throughout Phase I, input was solicited from community partners regarding their hopes and expectations from the Ndwedwe District Child Survival Project. These inputs are featured in the project's plans for the Phase II.

Prior to submission of this document, key project partners at the local level will have been consulted to ensure their full support and agreement with the NDCSP's plans for Phase II.

## D. Program Site Analysis

**Description of the Project Location and Beneficiaries** Ndwedwe is part of what has been termed the "Durban collar region"—a rural and semi-rural area that was particularly underserved under the apartheid regime. At that time, what is now the KwaZulu Natal (KZN) province was divided into a number of administrative areas, classified by race and with unequally apportioned public services. Ndwedwe itself was included in the administrative area of the KwaZulu "non-independent homeland." Ndwedwe received few public services in comparison with the rest of the "homeland" due to its distance from the KwaZulu heartland.

The Project area is primarily rural with a dispersed settlement pattern; the population predominately is Zulu. There are no nucleated villages; instead, the area is conventionally divided into a series of 18 Tribal Authorities (TAs), each governed by an Nkosi (pl. Amakosi), or chief, and his Councilors and headmen (Nduna). The T.A.s are informally divided into a series of Isigodi with no fixed boundaries. During Phase I, the project worked with 13 TAs (the local NGO

Valley Trust works with the other five); and there are three more TAs in the extended Project area. The province of KZN has recently announced that, due to a reorganization of the city of Durban's boundaries, a number of nearby rural areas, including the southern half of Ndwedwe, will become part of the Durban "Unicity" by the end of 2000. At that time, new territory to the north of the current Ndwedwe Sub-District will be added to the District. See Annex VII for a map of the project area.

Although the new district boundaries are still uncertain, the population of the district was estimated as follows in 2001 (see Table 1 below).

**Table 1: Population Figures for the Ndwedwe Sub-District**

<b>Population Group</b>	<b>Number</b>
Population of Children 0-59 months	18,648
Population of Women 15-49 years	49,073
Total Population	144,795

Source: GIS Unit, Informatics Section, KZN Department of Health, Pietermaritzburg, 2001.

Based on these population figures, it is estimated that 10,404 births will occur in the project area of the four-year project period.

**Health Status of the Target Population** According to the Preliminary Report of the 1998 South Africa Demographic and Health Survey (DHS), the infant mortality rate for KwaZulu-Natal was 52.1 per 1000 live births during the five years before the survey, compared with a national IMR of 45.4. Recent government figures, as yet unpublished, estimate that the IMR may be as high as 102/1000, and the under-five mortality rate may be up to 148/1000, in DC 29 (King Shaka District, of which Ndwedwe is now a Sub-District). Nearly half of this mortality (23.2 per 1000 live births) occurred during the neonatal period in KZN, while the post-neonatal infant mortality rate was 28.9. The child mortality rate for the Province was 23.6 per 1000 children surviving to 12 months of age. The total under-five mortality for KZN during this period was 74.5. The DHS reports an alarming trend for the nation, in which both the IMR and mortality in the 1-4 year age group, after declining steadily during the 1986-1990 period, began to display a gradual but steady increase after 1991. The current HIV/AIDS epidemic is the most likely cause of the increase. Another alarming development in KZN is a recent outbreak of cholera in the north of the province. As of March, 2002, a total of 8551 cases of cholera had been confirmed in the King Shaka District (DC 29). The NDCSP is taking action to prevent cholera and other forms of diarrhea in the context of its diarrhea prevention intervention, and will be prepared to take further action as required.

A recent national DOH report on maternal deaths<sup>1</sup> states that a reliable estimate of the national Maternal Mortality Ratio (MMR) is impossible due to poor reporting. Reliable estimates were developed for three provinces, but not KZN. For the Free State, the estimated MMR was highest at 135 per 100,000 live births. The MMR in KZN is likely to be even higher, since neonatal, infant, and child mortality, as well as most other health indicators, is worse in KZN than in the Free State. The MMR of the Project area, then, can be assumed to be above 135 per 100,000 live births. The same report identifies the "big five" causes of maternal death in South Africa as

<sup>1</sup> Saving Mothers: Report on Confidential Enquiries into Maternal Deaths in South Africa. 1998.

complications of hypertensive conditions in pregnancy (23.2%), AIDS (14.5%), obstetric hemorrhage (13.3%), pregnancy-related sepsis (11.9%) and pre-existing medical conditions, especially cardiac disease (10.4%). The report notes that the percentage of maternal deaths from AIDS-related causes is likely to be much higher than reported, since HIV status was unknown in 75.8% of the maternal deaths.

The major causes of infant and child mortality in the province of KZN<sup>2</sup> include diarrhea (estimated at 14.7% of under-five mortality) and respiratory tract infections (9.3%). In the main referral hospital, Osindisweni Hospital, serving the Project area, 172 deaths occurred among children under age five in 1999 and the first quarter of 2000. Of these, the greatest number (86 children) died of diarrhea and the second highest cause of death (25 children) was respiratory illness. Twenty-three deaths each were attributed to malnutrition-related causes and meningitis. Neonatal causes accounted for 8 deaths, dysentery for 5, AIDS for 4, and “herbal intoxication” (generally due to herbal enemas administered by untrained TBAs) for 5. There were no deaths from measles, tetanus or acute flaccid paralysis.

Major causes of infant and child morbidity in the Project area are deduced from clinic service statistics on outpatient diagnoses collected by the NDCSP and DHSMT from all clinics serving the Sub-District. From July 1999 to June 2000, 33,030 pediatric cases under 60 months of age were seen and diagnosed in the clinics. Of these, 3,600 were cases of watery diarrhea and 228 were bloody diarrhea. 1,053 of these cases were diagnosed as pneumonia and 241 as marasmus/kwashiorkor. Among immunizable diseases, there were 18 diagnosed cases of measles, 11 cases of pertussis and 2 cases of tetanus. The remainder were classified as “other causes;” mostly colds, flu, minor injuries and gastric disturbances. Of the common threats to child health and survival, watery diarrhea and pneumonia appear to be most common. The low number of immunizable diseases, particularly tetanus, suggests that new EPI protocols introduced in 1997 may have had a positive impact. It should be noted, however, that there has been a slight increase in all these conditions since the previous year (when 2,947 cases of watery diarrhea, 183 cases of bloody diarrhea, 739 cases of pneumonia, 93 cases of marasmus/kwashiorkor, 7 cases each of measles and pertussis, and no cases of tetanus were diagnosed). This slight increase could reflect increased use of the clinics (30,818 cases were seen), or it could be a result of the increasing number of children who are affected by HIV/AIDS. Based on baseline KPC results, it has been determined that 51% of children aged 0-23 months in the project area are fully immunized. MCDI feels that this immunization rate is inadequate and requires further continuation of the EPI component of our project.

The current and proposed NDCSP does not include a nutrition intervention; moreover, data concerning the nutritional status of infants/children in the Sub-District are somewhat limited. However, the tabulations presented in the KPC 2000 sampling suggest that while wasting is not common in Ndwedwe, stunting is.

The project also does not include specific interventions for control of malaria (which is not found within the project area), breastfeeding promotion (although breastfeeding promotion activities are incorporated into the project’s CDD, PCM, and MNC interventions), nor child spacing (although activities are again incorporated into the project’s MNC and HIV/AIDS/STI interventions).

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<sup>2</sup> Health Systems Trust. South African Health Review 1999. Durban, RSA.

The findings on project indicators obtained *from the baseline KPC* are included in Table 2 below.

**Table 2: 2001 Baseline KPC Findings**

**Ndwedwe District Child Survival Project**

<b>Cost Extension Proposal Objectives</b>	<b>Numerator/ Denominator</b>	<b>Percent</b>
<b>HIV/AIDS/STIs Objectives (LOE 30%)</b>		
1. 65% of mothers/caregivers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	97/300	32.3%
2. Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	52/174	29.9%
3. 90% of mothers can recognize at least two known ways in which a mother can transmit HIV/AIDS to her child.	174/254	68.5%
4. 90% of mothers/caregivers will be willing to allow children under their care to play with an HIV-positive child.	172/252	68.3 %
5. 100% of the appropriate health facilities in the project area provide HIV/AIDS/STIs prenatal screening and counseling.	Not KPC	
6. 75% of households caring for OVCs will be aware of and know how to access DSW grants and services.	Not KPC	
7. 85% of high school students in which School Health Clubs (SHCs) are active have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention.	Not KPC	
8. 60% of high school students with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use).	Not KPC	
9. 90% of high school students in which SHCs are active have adequate knowledge of the care of family members with AIDS.	Not KPC	
10. 50% of facilities provide Nevirapine to AIDS affected mothers according to protocols.	Not KPC	
<b>Control of Diarrheal Diseases Objectives (LOE 20%)</b>		
1. 90% of mothers/caregivers will provide oral rehydration therapy (ORS, SSS or available home fluids) to the child under their care during diarrheal episodes	23/31	74.1%
2. 50% of mothers/caregivers will report that they wash their hands before feeding the child under their care	20/135	14.8%
3. 85% of mothers/caregivers will give the same or more liquids than usual during diarrhea episodes	19/29	65.5%
<b>Pneumonia Case Management (LOE 20%)</b>		
1. 25% of mothers/caregivers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of symptoms	3/30	10.0%
2. IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the program clinics	Not KPC	
<b>Immunization Objectives (LOE 15%)</b>		
1. 65% of children aged 12-23 months are fully immunized per RTH card	22/43	51.2%

<b>Cost Extension Proposal Objectives</b>	<b>Numerator/ Denominator</b>	<b>Percent</b>
2. 80% of children aged 12-23 months will have received a measles vaccination per RTH card	26/43	60.5%
<b>Maternal/Neonatal Care Objectives (LOE 15%)</b>		
1. At least 60% of mothers/caregivers will be aware of three or more of the danger signs in newborns that require immediate treatment	21/300	7.0%
2. 40% of CHCs will have established a cost recovery/financial system or loan system for different priority PHC activities (e.g., transporting obstetrical emergencies, incentives for CHWs, HBCVs, etc.)	Not KPC	
3. During their last pregnancy, 50% of mothers will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	40/196	20.4 %
4. 80% of midwives in program area health facilities will be trained in the PEP modules	Not KPC	

### **Major Opportunities and Constraints to Maternal and Child Health in the Sub-District**

There are several constraints confronting Ndwedwe families, communities and health services providers in their efforts to improve child survival rates. Some remain from Phase I but new problems are also emerging:

***Socioeconomic Characteristics of the Population:*** The area's economy is based on subsistence agriculture, with a small amount of cash cropping (sugar cane). A large proportion of households, however, receives remittances from one or more family members employed in Durban or Gauteng Province. Most of those employed outside the Sub-District are men, but some women are employed in Durban as domestic servants. Paternal absence, therefore, is very common and maternal absence is not uncommon. The disruption of family residence patterns through migrant labor is thought to be one of the primary causes of the current explosion of HIV rates in KZN; and as noted above, results of the KPC 2000 study have indicated that the relegation of children to non-maternal caregivers often results in inferior child care and slower treatment-seeking during episodes of illness.

Literacy in the Sub-District is high by developing country standards, in that about 52% of KPC mothers and caregivers sampled report that they have some secondary education. Only Zulu language education has been provided to the adult population, however; and so very few speak or read English or Afrikaans (the main languages of business and administration in the country). The religious affiliations of Ndwedwe area residents are primarily Christian, although only a minority are members of mainstream churches (Roman Catholic, Methodist and Baptist). The remainder belongs to local churches, such as the Zionist, that combine Christianity with traditional beliefs. The Sub-District is sacred to the Shembe religion, and many Ndwedwe residents are Shembe adherents.

***The HIV/AIDS Epidemic:*** When the NDCSP began in 1995, South Africa's HIV/AIDS prevalence rate was low compared to other countries of the region. Since then, its HIV rate has grown alarmingly, particularly in KZN. Although it is difficult to document because no IMR/CMR statistics were kept for the "homelands" under the apartheid system, KZN is thought to be one of the regions in which under-five mortality rates are now on the rise after decades of decline. It is plausible to believe that the factor responsible for this dramatic change is the Province's rapidly escalating HIV/AIDS rates. South Africa now has the fastest-growing AIDS epidemic in the world as well as the majority of the AIDS cases in the world and child mortality rates are projected to increase by 100% in the next decade (UNDP: HIV/AIDS, Human Development, South Africa 1998). In KZN, the number of people living with HIV/AIDS (PLWA) and children affected by AIDS will rapidly outstrip the capacity of existing public service institutions to provide care for them. In Ndwedwe Sub-District itself, about 29-30% of the pregnant women who were tested during antenatal care were found to be HIV-positive (Osindisweni Hospital, 1999). Although Zulus possess strong traditions of family care and support, most Ndwedwe residents are impoverished and many consider themselves to be unable to undertake the support of additional children. This reluctance is exacerbated by the AIDS stigma, which is so severe that even some family members in the Ndwedwe have abandoned PLWA. Abandonment of infants by HIV-positive mothers is a growing problem in the Sub-District.

***Care of Children by Substitute Caregivers:*** The 2001 KPC survey suggested that about 15% of children are under the care of someone other than their mothers; and that these non-maternal caregivers on average render inferior care in a number of areas. This trend is only partially caused by the HIV/AIDS epidemic. The economy is based largely on subsistence agriculture, but a large proportion of households depend on remittances from one or more family members employed in urban areas. Most of these are men, but some women are employed in Durban as domestic servants. Paternal absence, therefore, is common and maternal absence is not uncommon. Children are often left in the care of grandmothers, older siblings and other caregivers.

***Persisting Problems with Traditional Causes of Morbidity and Mortality:*** Clinic records collected by the Project suggest that, although measles rates appear to have been significantly reduced in the Sub-District during Phase I of the project, high diarrhea rates continue to be a problem. The fact that, as described above, the number of children affected by AIDS will grow dramatically in the next five years is another barrier to efforts to improve child health. Common childhood killers such as pneumonia and diarrhea are likely to be higher among Ndwedwe children, either because their mothers will be unable to render adequate childcare, or because the child him/herself will be HIV-positive. As noted, the NDCSP's KPC 2001 study suggested that children cared for by substitute caregivers are likely to receive inferior care and thus may be more vulnerable to the common causes of childhood morbidity and mortality.

***Fragmentation of Services and Shifting Administrative Boundaries:*** South Africa is still a country in transition. Fragmented systems of administration, supply and supervision left by the previous regime have impeded the new government's efforts to improve conditions through more effective public services, including health care. The system of separate services provided to the various ethnic and racial groups under the apartheid administration left the Project area with a highly inefficient health system characterized by redundancies as well as gross inequities and serious gaps in services. At the initiation of Phase I of the Project, there was no district health

system and the eight clinics serving Ndwedwe Sub-District were administered and supplied by four separate institutions, two of which were outside the area. Service delivery was also poorly integrated, in that each specific service (i.e., immunization) was available only on its designated day each week. Since then, the DOH has made an effort to institute an integrated District Health System for Ndwedwe Sub-District and other collar region districts. MCDI has been an active participant in this process, and the NDCSP Project Manager has provided technical assistance as a member of the DHSMT. The clinics are still under the administration of the hospitals, however, and the Regional office has been slow to shift authority to the districts. These factors have impeded DOH progress in organizing a centralized and integrated administrative, supervisory and supply system. Inefficiencies therefore persist. For example, Montebello Hospital recently returned a portion of its budget to the treasury unspent; despite the fact that the clinics it supplies are chronically short of drugs and medical equipment.

In November 2001, the health and local government systems were reorganized and districts were expanded to take in much larger geographical areas that encompass several of the old Magisterial districts (such as Ndwedwe). Simultaneously the boundaries of Ndwedwe itself underwent a radical transformation under which the southern half of Ndwedwe Sub-District joined the Durban Metropolitan Area. A larger area to its north was added to Ndwedwe, including three new clinics and a new hospital, and Ndwedwe was designated as a Health Sub-District under the administration of the larger DC 29 (King Shaka, or Ilembe) District. The DHSMT will continue to manage the Sub-District Health System for Ndwedwe, but it will require more intensive technical assistance in its effort to absorb the new area and extend its training and data collection initiatives into entirely new territory. In Phase II, therefore, the NDCSP will assist the DHSMT to integrate the new area, to establish effective supervision of clinics and community volunteers, and to rationalize the distribution of key resources (drugs, medical equipment and transport).

***Current Status of Health Care Services:*** The health facilities serving the Ndwedwe Sub-District include three hospitals (Osindisweni, Montebello, and Applesbosch), one Community Health Center (Ndwedwe) and ten clinics, two of which (Oakford and Ekukhanyeni) are Catholic mission facilities that are partially subsidized by government. It is anticipated that now that Qadi clinic will be incorporated into the Durban unicity, they will be much better resourced. For the project, however, the reorganization means that it will now have to deal with 4 administrative structures. The NDCSP will continue to work with all Phase I clinics, and will expand its Project area to include the new clinics and hospital as well. The Project will, therefore, provide technical and management assistance to three hospitals, 10 clinics, and Ndwedwe Community Health Center during Phase II. Some areas of Ndwedwe are served bi-monthly by mobile clinics operating from KwaMashu Polyclinic in Durban, but the majority of the Sub-District is not reached by mobile services. Other than Oakford Clinic and Priory, there are no NGOs providing health services in the Project area.

***Results of Facilities Assessment:*** In December 2000, NDCSP conducted assessments of the two hospitals and six of the seven clinics in the Project under Phase I. Transportation for referral to the next level facility was identified as the greatest barrier for the clinics in providing appropriate care. Many clinics use a toll-free number to notify the KZN Provincial Transport Authority to send an ambulance, but in some remote areas, it can take two to four hours for the ambulance to arrive.

Due to transportation problems, relatively few births occur in the more remote clinics. Some clinics stated that pregnant women are referred directly to the hospital for antenatal care, as the clinics do not draw blood specimens for routine tests, due to difficulties in transporting the blood samples to the nearest hospital for testing. However, in the clinics where NDCSP has introduced the rapid syphilis and rapid HIV tests, the need to transport blood samples has been obviated. Regarding the breastfeeding of children by HIV positive mothers, hospital and clinic staff were unsure as to the correct recommendation. Many clinic staff were confused as they stated they had heard both positive and negative comments regarding breastfeeding by HIV positive mothers. Routine supervision was lacking in most clinics due again to problems of transport and bad weather which can make the already bad roads impassable during the rains. All of the clinics seemed to have in stock the most of the essential drugs for treating children under five and pregnant women.

***Barriers to Access and Service Delivery:*** During IMCI supervision visits, the NDCSP and provincial DOH have jointly documented a number of factors limiting access to effective health services. The first is weak and intermittent supervision, which is a consequence of the fragmentation of the health system described above and of poorly defined supervisory standards. The second is shortages of essential drugs and equipment caused by poor stock management, fragmented sources of supply, poor transport and lack of communication between facilities and the hospitals that supply them. A third constraint is poor communication between health facilities and community. This has led to community resistance to the implementation of IMCI, and to the failure of nurses to perform their maternal counseling and health communication functions.

Geographic access is less than optimal under the present system, although it is relatively better than many developing countries – approximately 60% of the District's area is within 5 km of a health facility, and about 90% is within 10 km of a facility. Project staff estimates that less than 10% of the population of Ndwedwe does not have access to medical care due to transport difficulties. Access becomes extremely difficult during rainy seasons, during which approximately 50% of the population does not have access. The estimated travel time to reach a clinic ranges between ½ hour to 2 hours. Under normal conditions (during daylight and when the roads are not impassable, which often happens during the rainy season), clinic workers are able to radio for an ambulance to transfer a sick child from the clinic requiring referral to a hospital. The ambulances are usually able to arrive at the clinic within an hour. However, the case is quite different at night, when the clinic is only open to receive maternity cases, and ambulances do not go out for security reasons. Remote clinics such as Wosiyana do not even have a local ambulance system.

In the absence of the ambulance service, it is somewhat difficult for health workers to determine whether caretakers of children requiring referral will promptly seek care at a referral facility. To a limited extent, clinic workers are able to assess, based on their location and the time of day, the feasibility of obtaining transport to the referral facility in terms of availability of transport, and ability of the family to pay if commercial transport is necessary. If the clinic worker feels that the family will not be willing or able to find and/or pay for the commercial or public transport necessary for the trip to the hospital, they usually try to stabilize the child until transport is available, or try to provide the best treatment possible at the clinic. The CHWs, HBCVs, and TBAs can often help identify someone with transport who can take the child, or will walk with the mother to help her carry the child to the clinic. However, unless they have their own vehicle,

it is unlikely that anyone would leave home for a health facility at night. The project is negotiating with DOH for an ambulance in clinics, especially the remote rural clinics (Wosiyana, Thafamasi) and the 2 new clinics (Asidumbini and Schipini).

A 2000 National Primary Health Care Facilities Survey conducted by the Centre for Health Systems Research and Development indicated that in KwaZulu Natal province 92.5% of the fixed facilities, 75% of satellite and 64.3% of mobile clinics had ambulance services available for emergencies. Also, 55.3% of the emergency vehicles had a response time of 1 hour or less compared to 29% in 1998. 87.5% of clinics had telephone services available; in rural areas 54.2 % of the telephones were functioning.

Project staff estimate that the minimum amount of funds considered to be necessary to enable caretakers to promptly seek and use case management services is Rand 10. Unfortunately, children are often left with a caretaker who does not have any money at home. In addition, grandparents are decision makers at home, and therefore, the decisions that they make may or may not result in the desired prompt level of access.

The NDCSP will address these barriers and constraints through its training programs and by providing technical assistance to the DHSMT in establishing a centralized and coordinated system of supply and administration. More specifically, the Project is proposing to the provincial DOH that the DHSMT and MCDI implement a systematic analysis of the transport needs of the Sub-District and develop a plan for more rational deployment of existing transport resources (both vehicles and funds). A workshop on stock management held in 2001 focused on training clinic staff how to maintain a rational flow of drugs and supplies. The Project Manager will also work with the new head of Montebello Hospital to identify and address the hospital's current problems in establishing a reliable supply of drugs to the clinics within its area of responsibility. During Phase I, drug supplies were assessed at Montebello and Osindisweni Hospitals and at six clinics (Nyuswa, Thafamasi, Wosiyana, Qadi, Oakford and Ndwedwe Community Health Center) in the context of a Hospital and Clinic Capabilities Assessment commissioned by MCDI. Similar assessments are in planning for the facilities of the extended Project area, and these assessments will serve as a baseline for the logistics strengthening exercise.

***Behavioral Factors:*** The KPC 2000 qualitative sub-study revealed a number of behavioral factors that may influence maternal and child health. The status of Zulu women is generally considered to be poorer than that in other ethnic groups in South Africa. A couple is not married unless a very large brideprice (lobola) is paid to the bride's family. Once lobola is paid, the husband is thought to have full control over his wife's sexual and reproductive rights. Decisions such as completed family size, contraception, and (in the context of the current AIDS crisis) the use or non-use of condoms, are considered to be the prerogative of the husband. At the present time, however, young men in the Project area are reporting a crisis in Zulu marriage caused by the fact that unemployment and/or low wages have placed the collection of lobola beyond the reach of the average young man. Sexual liaisons without marriage, unheard of in traditional times, have therefore become common in Ndwedwe. The status and well-being of children born to these unions is problematic. In addition, the well-being of children left behind through migrant labor, or through abandonment by or death of an HIV-positive mother, is usually precarious.

Discussions with staff on their experiences from the field highlight numerous factors relating to care-seeking behaviors. In some families, for example, grandmothers decide if the child should seek medical care. In addition, most parents seek the help/advice of the traditional healer prior to seeking Western medical care. Unemployment and distance from health care facilities coupled with bad roads and poor transport are other factors that hamper one's decision to seek care. A clearer understanding of the current knowledge and practices of mothers and families, including factors that influence their decisions to seek care, will be available following the qualitative/formative research.

***Changes Made to the DIP from the Proposed Application:*** Although the Project description and budget are essentially unchanged since the cost-extension application was submitted, South Africa is a rapidly changing environment and these changes have affected some of the NDCSP's local partner organizations since the proposal. There have been changes in the Project's retinue of partners, therefore, and in the roles and responsibilities of various organizations in the execution of the Project. The future of some organizations that were proposed as partners (e.g., Tsu Chi Foundation) is now in doubt, and so replacements have been identified. New partners include Doctors for Life and the University of Natal's Center for Rural Development. As a result, some of the activities have been modified to be suitable to the new partnerships that have been developed since the submission of the application. Activities that involve partners are as follows:

Model Crèche Program for CABA: The future of Oakford Clinic, which was to be the lead partner and to provide a site for this activity, is uncertain since it is intermittently closed due to security concerns. TREE is still an active partner on this activity, but since TREE specializes in early education rather than health, it was decided that an additional collaborator was needed. The new partner, Doctors for Life, now operates a series of small day-care centers for orphans in other areas of KZN and the Orange Free State. DFL, in collaboration with MCDI and TREE, has agreed to open a Model Crèche on or near the grounds of the Ndwedwe Community Health Center. The Crèche will be staffed by volunteers (as is the case in the day care centers operated by DFL) and will provide day care, including three basic meals, early education and basic child care, for a small number of children affected by AIDS (CABA) who can sleep in the home of relatives or neighbors. If the program is successful, more crèches will be opened on the same model in other parts of Ndwedwe Sub-District, and a set of formal guidelines and recommendations will be developed to enable the DOH to apply lessons learned in any future program to provide for the needs of children affected by AIDS (CABA) in KZN.

Income Generation for Households Caring for CABA: Plans developed during Phase I to work with the Taiwanese Tsu Chi Foundation on income generation have been slow to develop, and it now appears that the Foundation and its activities are dwindling in South Africa. The NDCSP is now developing a plan to work with a consultant from the Center for Rural Development of the University of Natal, Pietermaritzburg, on income generation for households caring for orphans and vulnerable children. Employing the sustainable livelihood approach, the consultant first will lead the staff in conducting a sustainable livelihoods asset analysis of the community's natural, physical and economic assets. Relevant activities in the surrounding area will also be examined to identify latent opportunities for income generation. After identifying opportunities that can either enhance the community's assets or reduce the vulnerability of existing assets, the consultant, NDCSP staff, and the CHCs will select specific activities and projects for implementation. Preferred participants in these income-generating projects will be the neediest households among

those caring for CABA. The neediest households will be identified by the CHCs after they take part in a PRA exercise (the Wealth Ranking Exercise) that is designed to assist them in establishing appropriate indicators of economic well-being in a setting wherein cash income is a poor indicator of household consumption levels.

Technical Assistance to DHSMT for CHW Management: The DOH is making small grants available to NGOs for the management and supervision of the CHW program. As no suitable indigenous NGO exists in Ndwedwe Sub-District that could carry out this function, though there are a number of interested CBOs. The DHSMT has expressed interest in consolidating these CBOs into a single organization large enough to undertake the management of the Ndwedwe Sub-District CHWs. This proposed organization will require a great deal of assistance and capacity building. Although the DOH has a contract with the Valley Trust to provide training to NGOs and CHWs, the Valley Trust is not specifically a health organization. The DHSMT, therefore, would like MCDI to provide additional training to the new NGO that would enable its staff to oversee the primary health care and maternal/child health activities of the CHWs. For example, the NDCSP is well placed to train the new NGO to supervise the CHWs' activities related to the community component of IMCI and home-based care for PLWAs. Although this consolidated NGO is still in the planning stages, the NDCSP will pursue this initiative with strong interest, since the CHWs are an important part of its strategy for reaching communities throughout the extended Project area.

Supervision of HBCVs by Mobile Clinic Staff: Many areas of Ndwedwe are visited every two weeks by outreach personnel from Montebello Hospital, Ndwedwe Community Health Center and KwaMashu Polyclinic. These mobile clinic staff members, most of them nurses, are the appropriate personnel to assume the supervisory functions that MCDI staff members are now performing for the Home Based Care Volunteers. Because none of the mobile clinic staff have been trained in HBC themselves, the NDCSP staff members who are now supervising the HBCVs will provide training for interested members of the mobile clinic staff (and fixed site clinic staff in areas not covered by the mobile clinics) in HBC and in performance monitoring and evaluation. By the end of the Project, the supervisory role will be handed over to the mobile and fixed site clinic staff who, as regular employees of the DOH, will be able to manage the HBCVs on a sustainable basis.

In addition, the baseline KPC survey informed the further development of the project's Phase II results based objectives. In some cases, the targets for specific objectives were changed due to the fact that the baseline data was higher (or lower) than expected. Changes to the objectives included in the cost-extension application proposal include the following:

- The targets for several objectives changed as a result of higher than anticipated baseline KPC findings.
- The baseline findings for the "Percent of women willing to care for a family member who is living with AIDS" was quite high (76%). It was therefore removed from the list of project targets, however messages to prevent social stigmatization will continue be incorporated into the NDCSP's BCC strategy for HIV/AIDS.
- The objective relating to the "Percent of CHCs that will have established a community-based health fund" has been slightly modified. The indicator no longer specifies what the community-based health fund would support; rather it has been modified to allow CHCs

to determine the health needs that are priorities for the community (these could include transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc.).

- Due to the South African government's recent policy change regarding the use of Nevirapine to prevention mother to child transmission of HIV/AIDS, the project was able to incorporate an additional indicator relating to this important approach.
- As much as possible, efforts were made to ensure that each intervention area would be monitored for critical knowledge, practice, and coverage changes.

In addition, some staff members working with the NDCSP (both in the Home Office and field) have changed since the application was submitted in December 2000. The previous NDCSP Project Manager, David Patterson, left the project at the end of September 2001, and Dr Farshid Meidany is the new replacement. Dr Meidany is a Community Health Specialist and Epidemiologist who previously worked with the Provincial Department of Health in the Eastern Cape.

Within the Home Office, two new Senior Project Officers will be in routine contact with and provide backstopping support to Dr Meidany, Alyssa Wigton and Dennis Cherian. The CVs of Dr Meidany, A. Wigton, and D. Cherian are included in Annex IV.

## **E. Summary of Baseline and Other Assessments**

In November, 2001, MCDI implemented a Knowledge, Practices and Coverage (KPC) survey to collect baseline information for the Phase II project. Information from this survey supplemented some of the findings obtained during MCDI's 2000 KPC survey, which primarily focused on HIV/AIDS.

A summary of the Rapid CATCH findings from the NDCSP Baseline Survey is included below.

<b>NDCSP Rapid Catch Findings</b>	<b>Percent</b>
<b>Measure of child health and well-being</b>	
% of children aged 0-23 months who are underweight(-2SD from the median weight-for-age, according to the WHO/NCHS reference population)	N/A
<b>Prevention of Illness/Death</b>	
% of children age 0-23 months who were born at least 24 months after the previous surviving child	N/A
% of children age 0-23 months whose births were attended by skilled health personnel	84.5%
% of mothers with children age 0-23 months who received at least two tetanus toxoid injections before the birth of their youngest child	88.5%*
% of children age 0-5 months who were exclusively breastfed during the last 24 hours	34.3%
% of children aged 6-9 months who received breast-milk and complementary foods during the last 24 hours	N/A
% of children age 12-23 months who are fully vaccinated before the first birthday	51.2%
% of children 12-23 months who received a measles vaccine	60.5%
% of children 0-23 months who slept under an insecticide-treated net the previous night	N/A
% of mothers with children age 0-23 months who cite at least two known ways of reducing the risk of HIV infection	68.0%
% of mothers with children age 0-23 months who report that they wash their hands with soap/ash before food preparation, before feeding, after defecation, and after attending to a child who has defecated	5.2%
<b>Management/Treatment of Illness</b>	
% of mothers of children age 0-23 months who know at least two signs of childhood illness that indicate the need for treatment	36.3%
% of sick children age 0-23 months who received increased fluids and continued feeding during an illness in the past two weeks	1.4%

\*This information is based on one TT injection as asked in the baseline KPC

There has been improvement in knowledge, practices and behavior among mothers/caregivers since the project's inception. A comparison of the population prior to project start-up in 1996 with the population after the completion of Phase I of the project is described per intervention area below.

*Control of Diarrheal Disease:* In 1996, an unexpectedly high proportion, 38.9% of the mothers surveyed stated that their child had experienced an episode of diarrhea with the two weeks prior to survey, compared to 23.9% in 2001. Of these children, only 47.3% were given the same or

more amounts of fluids than usual. By 2001, 66% of mothers/caregivers reported giving the child same or more amounts of fluids than usual during the diarrheal episode. Of these mothers/caregivers, 73.0% correctly described how to mix sugar-salt solution compared to 60.3% in 1996.

*Pneumonia Case Management:* The percent of children who experienced cough or difficult/rapid breathing in 1996 and 2001 were 14.5% and 55.6%, respectively. This increase can be due to greater recognition of danger signs of pneumonia.

*Immunizations* In 1996, 26% of children 12-23 months of age had been fully immunized. By 2001, 51.2% of children 12-23 months of age had been fully immunized according to their RHC. Fifty-one percent and 60.5% percent of children in this age group received the measles vaccine in 1996 and 2001, respectively.

*Maternal and Newborn Care* The Phase I baseline KPC survey revealed that only one-third of the respondents indicated that a health professional had tied and cut the cord at the child's delivery. In contrast, the 2001 KPC showed that over 80% (82.2%) of mothers with children 0-23 months of age reported their birth was assisted by a health professional. The 2001 KPC further revealed that 96.5% (111/115) of mothers reported that they had breastfed their child. Of the mothers who breastfed, 54.9% said they put their child to their breast soon after delivery, 27.4% did so within 8 hours of birth while 18.6% began breastfeeding after 8 hours of delivery. This data was not available for the 1996 KPC.

*HIV/AIDS* In 1991, approximately 75% of the respondents said they know how to prevent HIV/AIDS compared to 88.5% in 2001. In the Phase I baseline survey, 56.8% named a condom as a method of prevention, 20.3% named faithful monogamy with an uninfected partner and 9.1% named abstinence. In 2001, of the 234 respondents who reported there is something a person can do to avoid AIDS, 90.2% named condoms as a way to avoid AIDS, 48.7% reported abstinence as a method of prevention, and 17.5% named monogamy. A remarkable increase was observed for all three responses for way to prevent HIV/AIDS.

During the final year of Phase I, MCDI carried out preliminary facility assessments (including an inventory of essential drugs and equipment) in the health facilities of the district. With DramAidE and TREE, an institutional strength assessment was implemented using an instrument designed for use in South Africa.<sup>3</sup> The results of these assessments will be compared with final assessments using the same instruments in year 4.

Also during the final year of Phase I, an independent evaluation of DramAidE's activities was conducted by the Child Development Research Unit at the University of Natal. The evaluation process used both quantitative and qualitative evaluative tools. Qualitative techniques included an assessment of background documentation, focus groups with youth and community bodies, and semi-structured interviews with teachers. A quantitative evaluation of the project's impact on schools with active Health Clubs, in comparison to non-intervention schools in the area, was also conducted.

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<sup>3</sup> How Is Your Organization Doing? A Guide for the Assessment of Organizational Capacity. Human Sciences Research Council with support from USAID/RSA. Pretoria: 1996.

The DramAidE evaluation concluded that the intervention successfully achieved its major goal of attitudinal and behavior change in the target school youth groups. The quantitative assessment showed a significant increase in both knowledge and practice regarding the appropriate sexual behavior to avoid transmission of HIV/AIDS in intervention schools. The out-of-school youth group was also found to have benefited significantly. Teachers gained confidence in their ability to discuss the virus with learners, learned to not discriminate against those who had the virus, and about caring for those who were infected and affected by it. The recommendations resulting from the evaluation have informed the planned activities for Phase II expanded activities during Phase II and are incorporated in this DIP.

In addition, in order to inform the Phase II project's plan to extend the collaboration of community-based activities with traditional healers, MCDI is undertaking a research study (funded by Margaret Sanger Centre International South Africa) to develop a better understanding of the knowledge and practices of these practitioners, as well as to develop a better understanding of the potential for collaboration.

As stated throughout the project intervention sections, the project will conduct formative research during 2002 using the BEHAVE Framework to gain more insight into the knowledge and practices of mothers and other community members. In addition, the qualitative research will seek to identify the beliefs and practices that constitute a barrier to behavior change in key areas that were identified as resistant to change in Phase I (such as feeding practices during illness and after a diarrhea episode).

Finally, both the MCDI domestic offices and field offices participated in an Institutional Strengthening Assessment (ISA) during March 2002 to identify the organization's strengths and weaknesses at the field, home office, and domestic headquarters levels. The findings from the ISA are being used to identify a short-term strategy to improve technical and administrative capacities, as well as to ensure more effective and efficient programs on the ground. These findings will also be incorporated into Medical Care Development's longer-term Strategic Planning exercises.

## **F. Program Approach**

The NDCSP seeks to introduce an integrated package of maternal health, child health and HIV/AIDS interventions that will improve knowledge, skills and capabilities at the health facility, community and household levels. The NDCSP will strengthen the capacity of the District Health System Management Team to plan, oversee, manage and evaluate these interventions and to assume complete responsibility for them by the time the Project ends.

The goals and objectives of the NDCSP are as follows:

**PROGRAM GOAL:** To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of reproductive age (WRA).

## **RESULTS-ORIENTED OBJECTIVES:**

### **HIV/AIDS/STIs Objectives (30% of LOE), by EOP:**

- Sixty-five percent of mothers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.
- Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.
- Ninety percent of mothers will be able to recognize at least two known ways in which a mother can transmit HIV/AIDS to her child.
- Ninety percent of women will be willing to allow children under their care to play with an HIV-positive child.
- One hundred percent of the appropriate health facilities in the project area will provide HIV/AIDS/STIs prenatal screening and counseling.
- Seventy-five percent of households caring for OVCs will be aware of and know how to access DSW grants and services.
- Eighty-five percent of high school students in which School Health Clubs (SHCs) are active have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention.
- Sixty percent of high school students with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use).
- Ninety percent of high school students in which SHCs are active have adequate knowledge of the care of family members with AIDS.
- Fifty percent of facilities provide Nevirapine to AIDS-infected mothers according to protocols.

### **Control of Diarrheal Diseases Objectives (20% of LOE), by EOP:**

- Ninety percent of mothers and non-maternal caregivers will provide oral rehydration solution (ORS) to the child under their care during diarrheal episodes.
- Fifty percent of mothers and caregivers will report that they wash their hands before feeding the child under their care.
- Eighty-five percent of mothers and caregivers will give the same of or more liquids than usual during diarrhea episodes.

### **Pneumonia Case Management Objectives (20% of LOE), by EOP:**

- Twenty-five percent of mothers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of symptoms.
- IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of project area clinics.

### **Immunization Objectives (15% of LOE), by EOP:**

- Seventy percent of children aged 12-23 months are fully immunized per RTH card.
- Eighty percent of children aged 12-23 months will have received a measles vaccination per RTH card.

### **Maternal/Newborn Care Objectives (15% of LOE), by EOP:**

- At least 60% of mothers will be aware of three or more of the danger signs in newborns that require immediate treatment.

- Forty percent of CHCs will have established a community-based health fund to cover health needs designated as priorities by the community such as transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc.
- During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter.
- Eighty percent of midwives in Project area health facilities will be trained in the PEP modules.

*Major Strategies to be Employed:* The NDCSP will achieve these goals and objectives by improving the organizational and technical capabilities of the Project's primary partners—the DHSMT and local NGOs (Doctors for Life, the Diakonia Council of Churches, TREE, and DramAidE) – and by establishing strong and sustainable community institutions, such as the Community Health Committees and the Home Based Care Volunteers, that can plan and execute activities aimed at improving the health of children and their mothers. The Project's capacity building strategy relies on its multi-faceted training program that includes management and organizational strengthening for the DHSMT and for CHC members. At the community level, the Project will train CHWs, HBCVs and CHCs to carry out simple exercises to identify priority areas for their activities, and to plan and execute activities aimed at improving the key household practices that support the successful introduction of the community component of IMCI.

The NDCSP's response to the Project area's HIV/AIDS crisis is also an integrated one. It constitutes a three-pronged strategy that combines a broad array of prevention activities with palliative care activities for PLWA and CABA. AIDS prevention and behavior change initiatives will be carried out through CHCs, HBCVs, CHWs, trained TBAs, and School Health Clubs; but the core of the NDCSP's HIV/AIDS Project is the cadre of home-based care volunteers (HBCVs) who have been trained and deployed in Ndwedwe Sub-District. The HBCVs provide basic care to PLWA (including children and their mothers) and instruction to patients' families on how to meet their needs. HBCVs have been trained in laypersons' counseling skills, and they counsel troubled and bereaved children and families. They also educate the families they visit about preventing transmission of HIV and recognizing and seeking treatment for STIs. The NDCSP is now examining the feasibility of training the HBCV to take on directly observed treatment strategy (DOTS) responsibility for the TB patients they visit. By undertaking this broad range of functions, they will serve as community reservoirs of information and skills relevant to STI/HIV prevention and to care and support of community members affected by AIDS.

*General Approach to Integration:* As the DOH has adopted a policy to promote the IMCI strategy based on WHO/UNICEF recommendations, the Project will seek to integrate its interventions through continued support to the introduction of IMCI to the Project area.

In addition to CDD, PCM, and EPI, an additional HIV/AIDS module has been added by the Human Resources Development Section of the KZN DOH. Management of children living with HIV/AIDS is, therefore, a part of this integrated approach. During Phase I, Ndwedwe Sub-District was chosen by the provincial DOH as one of the pilot districts for IMCI implementation. Since that time, at least one nurse has been trained in the IMCI protocol from each of the facilities in the Phase I Project area, and in the larger facilities, as many as four have been trained. MCDI participates with supervisors from the DOH's MCH Directorate in quarterly supervision of the IMCI-trained nurses. Training for Ndwedwe area nurse supervisors is still in the planning stage, however, and IMCI training has yet to be introduced in the facilities of the Phase II

expanded Project area. Working with the MCH Directorate to schedule and carry out the Supervisors' Training for the original area and the nurse training for the new area will be at the forefront of the NDCSP's agenda for the coming year.

To achieve integration of IMCI nurse training with community-level activities, the NDCSP is now beginning to introduce the community component of IMCI, first in the original Project area where nurses have already been trained, community-level IMCI will be initiated in the new areas. NDCSP Project staff will work with CHCs to carry out Key Family Practices GAPS Analysis exercises that will spotlight areas in which there is a critical need for change. An augmented GAPS Analysis tool is being developed to enable this exercise to be useful as a preliminary formative research method preparatory to the development of a comprehensive behavior change strategy for these participating communities.

Another major thrust of the project will be the integration and linkage of the facility-based IMCI with HH/C-IMCI, which is being piloted in a few key sites in South Africa. The integration of these two approaches will be facilitated by training and supporting the community health workers. The major elements of the HH/C-IMCI approach are outlined below. The Project's BCC strategy will be based on the elements of HH/C-IMCI, an integrated promotion of key family practices and associated emphasis behaviors.

Element 1: Partnership between health facilities and the communities The project will facilitate collaboration among health facility staff, the community health workers (e.g., CHWs, HBCVs, and TBAs), and community members. The health facility staff will help to train and support community based providers as they conduct their work in the community. Community workers will inform community members about the services available at the health center and encourage mothers to take their children for both preventive and curative services, follow up on vaccination defaulters, and use referral health facilities. The community-based providers will keep facility staff informed about community perceptions of the services and specific health needs of the community.

Element 2: Appropriate and accessible care and information from community-based providers Activities of the community based providers will focus on improving the treatment of sick children, improving referral of sick children to health facilities, decreasing harmful practices, and promoting preventive practices (such as hand washing). Health facility staff and NDCSP staff will share responsibility for supervision of the community-based providers. As part of the project's sustainability plan, however, responsibility will devolve to the CHCs and facility-based staff during the final year of the project.

Element 3: Integrated promotion of key family practices critical for child health and nutrition Training of the community based providers will focus on the integrated aspects of child health. For example, the impact of child spacing on child health will be a promotional factor discussed by the community-based providers. During Phase II, the project will continue to use multiple channels to deliver health messages such as by supporting the innovative strategy of working with youth in schools to promote the positive messages about HIV/AIDS prevention, care and support. Trainers at the model crèche will reinforce health messages about the care and feeding of sick children to parents, for example relating to the use of ORS, the importance of vaccinations, and danger signs for childhood illness. The project's BCC strategy will also teach other

community members, such as participants at pensioner gatherings and traditional healers, about key family practices and emphasis behaviors so they can reinforce and support behavior change.

***Roles and Responsibilities of Major Partners:*** During Phase II, the NDCSP's primary partner will be the DOH at all levels, but particularly at the district and Sub-District levels.

The NDCSP is continuing to work in the Phase I area and is coordinating its efforts with Durban Metro (primarily through the KwaMashu Polyclinic). Its most important collaborating partner, however, will be the District Health System Management Team (DHSMT) for the new Ndwedwe Sub-District. The NDCSP attends weekly meetings with the DHSMT to plan the week's activities and develop long-term strategies. The DHSMT is responsible for the management of the community-level programs (the CHC, CHW and HBCV programs) that MCDI relies upon to implement its community and household level behavior change strategy. Because the DHSMT is a relatively new institution with limited staff, it finds it difficult its management and supervision functions of these programs without assistance from organizations such as MCDI and other NGOs. Currently, the DHSMT is attempting to build a local NGO (from a consortium of small CBOs) that can manage and supervise the Ndwedwe Sub-District CHWs. The District Health Manager has suggested that, while the Valley Trust, a local NGO, will provide management and organizational training for this new NGO in accordance with its contractual relationship with the DOH, MCDI should provide technical training in areas such as community-level IMCI and the design and implementation of behavior change initiatives. The NDCSP will, therefore, develop a plan together with the DHSMT to build the new NGO's capacity to train and supervise the child health/IMCI and BCI activities in Ndwedwe area communities.

The NDCSP's principal collaborating partners are the following:

- **Department of Health:** Among many other functions, the KwaZulu-Natal Dept. of Health (KZN DOH) plans and implements in-service training (including IMCI training) for health facility staff throughout the Province. The Ndwedwe District Health System Management Team (DHSMT) is responsible for establishing an integrated local health system in Ndwedwe Sub-District.
- **DramAidE:** DramAidE is a South African NGO that organizes School Health Clubs (SCH) and conducts Life Skills Training to prevent the spreads of HIV/AIDS among school children, and organizes anti-AIDS activities among out-of-school youth. DramAidE will continue to work with MCDI to prevent HIV/AIDS by encouraging low-risk behavior among Ndwedwe teenagers. The NDCSP and DramAidE established eight School Health Clubs and implemented outreach programs for out-of-school youth in Phase I; and it will expand its Project by organizing an additional eight during this phase of the NDCSP.
- **Training and Resources in Early Education (TREE):** TREE specializes in training programs in early education and distribution of educational materials to crèche operators throughout KZN. Operators of eighteen of the 26 crèches in Ndwedwe Sub-District have been trained and equipped by TREE. TREE and Doctors for Life will contribute to MCDI's Project to pilot test care and support strategies for CABA by establishing a Model Crèche for orphans in Ndwedwe Sub-District. MCDI will bring the two organizations together and coordinate their activities in Ndwedwe. If the first Model Crèche is successful, additional Crèches will be established in the second half of Phase II.

- The Diakonia Council of Churches: The Council of Churches is a multi-denominational group that coordinates church activities in the Durban area. It has developed a program to assist ministers to respond to the AIDS epidemic by planning appropriate activities for their congregations. The NDCSP will also continue to work with the Diakonia Council of Churches to identify and train Ndwedwe church leaders who wish to initiate HIV prevention and PLWA/CABA care activities among their congregations. As in Phase I, MCDI will organize a series of workshops for church leaders, while Diakonia staff members facilitate the workshops, assist the church leaders to identify priorities and plan activities, and conduct training for them as needed.
- Doctors for Life (DFL): DFL, with a membership of 680 medical personnel, is a South African service and advocacy organization. Its many activities include a series of AIDS-related programs, including home-based care and care and support of children affected by AIDS (CABA).
- The University of Natal: The University's Dept. of Virology provides quality control for the HIV and STI rapid testing program carried out by the NDCSP in collaboration with PATH. The University's Center for Rural Development Systems has expertise in sustainable livelihoods analysis and planning for rural areas of KZN.
- Sinisizo and Oakford Clinic and Priory: Although the future of these two Roman Catholic organizations is now uncertain, both Sinisizo (a best practice training program for HBCVs) and Oakford were active partners in Phase I. If their prospects stabilize, either or both would be feasible collaborators for Phase II.

In addition, the NDCSP will coordinate and share information with Durban and Pietermaritzburg-based organizations such as Thandanani, The AIDS Foundation, the Child and Welfare Society and Durban Child Welfare.

*Involvement of Partners in Project Design*: Both the DHSMT and traditional leaders (the Council of the Amakosi) participated actively in the design of Phase II of the NDCSP during a series of fora in which the results of the KPC 2000 were presented and discussed. The seven CHCs active during Phase I also participated by taking part in PRA exercises aimed at identifying the child health problems that are most pressing in the view of their communities. Childhood diarrhea and HIV/AIDS were designated as top priorities by all the CHCs; and their input was taken into consideration in MCDI's selection of priority interventions and the level of effort devoted to each. During preparation of the DIP, NDCSP staff met with Doctors for Life to collaborate on design of the model crèche program and to elicit suggestions for improving the HBCV program. The Project's behavior change strategy was developed in collaboration with DramAidE.

*Relationship of the Project to other Health-Related Activities*: As described above, the NDCSP will maintain its close working relationship with the DOH at the provincial, district and Sub-District levels. The NDCSP participates with provincial DOH officials on the KZN IMCI Task Team which oversees the implementation of IMCI in the pilot districts and, eventually, throughout the Province. Participating programs and districts will share methods, materials and lessons learned; and all will take advantage of IMCI-related child survival messages developed with assistance of World Vision's Child Survival Project in northern KZN.

At the local DOH level, the NDCSP is a member of the District Health System Management Team (DHSMT) and the Project Manager attends weekly DHSMT planning meetings. In

addition to its collaborating partners, discussed in the section above, the NDCSP coordinates its activities with those of the Valley Trust, a South African NGO specializing in community development. MCDI and the Valley Trust have jointly funded and established three Community Health Posts in the Project area. The Health Posts are used by the mobile clinics and serve as meeting halls for groups of CHWs, HBCVs, CHCs, and trained TBAs. During Phase II, the DHSMT has asked MCDI to coordinate with the Valley Trust on building the skills of a local NGO that will be established to supervise the Sub-District's CHWs. Plans have not yet finalized, but it is expected that the Valley Trust will be responsible for improving the management and supervisory skills of the new NGO, while the NDCSP trains them to plan and implement health and child survival activities (particularly community IMCI and behavior change activities)

*Opportunities for Synergies with Other Sector Programs:* Although the NDCSP's closest working relationships are maintained with the health care facilities and the DOH, its activities extend into related sectors such as education and social welfare. Two of the NDCSP's primary partners, TREE and DramAidE have experience in pre-school, primary and secondary education. MCDI is enhancing the capacity of both these NGOs to expand into the health (especially anti-AIDS) domain, and is benefiting in turn from their educational expertise. During Phase II, a collaboration with the Dept. of Education will be established, particularly in individual schools in where DramAidE is operating. There, NDCSP and DramAidE staff will meet with the school's skills development personnel, life skills teachers and school psychologist to plan DramAidE's entry into the school and to ensure that messages do not conflict with the Dept. of Education's approach. The NDCSP has also established a relationship with the Dept. of Social Welfare, which makes small grants available to households caring for orphans. MCDI's staff includes a social work specialist who is organizing community meetings in each of the NDCSP's Tribal Authorities (TAs) to educate the community on the benefits offered by the DOSW and the mechanism for applying for these benefits. The DOSW grants and benefits are a valuable resource that will complement's the Project's efforts to ensure that CABA are cared for and supported in their own communities.

*MCDI's Role in Policy and Advocacy:* The NDCSP's involvement in policy and planning takes place primarily at the provincial and district levels, although NDCSP activities have implications for national level policies and programs as well. For example, the NDCSP's activities will influence the further implementation of HH/C-IMCI activities and expansion of rapid testing technologies for HIV and STIs. In addition, the project's cost-effectiveness study of its home-based care activities will inform discussions regarding their long term feasibility and sustainability. For example, the project's activities relating to ORS will be discussed with the DOH with a view towards informing the current DOH promotion of salt sugar solution (SSS).

In addition, the DOH has asked the project manager, a physician and epidemiologist with experience working with DOH health information systems, to help them produce quarterly and monthly provincial reports of epidemiological data (for example, cholera, HIV/AIDS, and TB, etc.). Through this partnership, data obtained via the NDCSP's community monitoring efforts will be incorporated into these reports. This will provide a unique opportunity to bring visibility throughout the country to both the project and its development of community based monitoring systems.

MCDI is an active member of the KZN IMCI Task Team and of the Ilembe (King Shaka) and Ndwedwe AIDS Task Teams. On all these bodies, the NDCSP participates in the planning of IMCI and AIDS activities for the province, district and Sub-District. The extended project will play an important advocacy role by promoting and supporting community based HIV/AIDS prevention, care and treatment initiatives. Moreover by advocating the expanded role of the community health committees in identifying and responding to perceived health problems affecting their communities, the CHCs will facilitate the empowerment of communities to make the DOH health delivery system more responsive. The advocacy role of the project will be strengthened through its membership in expanded networks of collaborative NGOs. These include the National Progressive Primary Health Care Network (NPPHC), which builds the skills of CBOs and brings primary health care issues to the attention of government. The Project's collaboration with the Diakonia Council of Churches affords it access to the faith-based institutions which have proven so successful in the promotion of "fidelity" and "abstinence" and/or delay of sexual debut.<sup>4</sup>

*Principal Challenges:* The primary new challenge that has arisen since the original Project proposal is the worsening of the HIV/AIDS epidemic. KwaZulu-Natal's HIV prevalence rate is one of the fastest-growing in the world. The DOH and USAID/Pretoria are deeply concerned about the progress of the epidemic, and both agencies are working with MCDI and World Vision to pilot test activities that, if successful on the Sub-District level, can be scaled up to the regional, provincial and national levels.

## **G. Organizational Development**

*Strengthening the PVO:* MCDI participated in a series of strategic planning workshops at MCD Headquarters in Maine in 1998. At that time, using a variety of organizational assessment methods,<sup>5</sup> all divisions of MCD identified their strengths and weaknesses and assessed the impact of these on the organizations' ability to carry out its mission statement. Weaknesses were found in the following areas: limited ability to effectively communicate MCD's message to its domestic and international constituents resulting in sub-optimal fund-raising; sub-optimal human resource management to ensure timely staff technical training, and limited organization-wide information sharing and/or technical assistance. To attack these weaknesses, an action plan was developed that empowered the International Division to recruit two public health physicians and additional CS Project support staff. In addition, a process was established for sharing information and expertise between the international and domestic programs that deal with child and maternal health, AIDS and community-based health planning.

In addition, during March 2002, both the MCDI domestic offices and field offices participated in an Institutional Strengthening Assessment (ISA) to gain further insight into the organization's strengths and weaknesses at the field, home office, and domestic headquarters levels. The findings from the ISA are being used to identify a short-term strategy to improve technical and administrative capacities, as well as to ensure more effective and efficient programs on the

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<sup>4</sup> Amarasingham, Green and Royes. "Final Evaluation: AIDS/ATD Prevention and Control Project." Synergy Project, Oct 21, 2000.

<sup>5</sup> Strategic Planning Workbook for Non-Profit Organizations (Miller Foundation); Partnering to Build and Measure Organizational Capacity (CRWR Committee); MOST Management and Organizational Sustainability Tool (MSH: Participatory Self Assessment of NGO Capacity, INTRAC).

ground. For example, the ISA highlighted the problems that have been encountered with MCDI's financial management system. In collaboration with its head office in Maine, MCDI is transitioning to a new financial management system that will be more responsive to the field. This new system will benefit the organization at all levels, including the head office in Maine.

The ISA findings will be incorporated into Medical Care Development's longer-term Strategic Planning exercises. The ISA exercise will occur again in 2003, to assess improvement in MCDI's technical, managerial, and administrative capacity over the life of the Project. The capacity building objective for the PVO Headquarters, then, is as follows:

- **MCDI (HQ) will show measurable improvement in its capacity and consensus scores between the baseline ISA and the ISA implemented in 2003 (e.g., management, governance and institutional learning).**

**Indicators:** Capacity and consensus scores on the institutional strength analysis exercises performed in years 1 and 2 of the NDCSP.

**Activities:** Development and implementation of plans for improving weakest capacity areas.

The NDCSP has been one of MCDI's vanguard child survival projects, in that it was the first to be supported by USAID/BHR/PVC under a Planning Grant in 1995-1997. The initiation of the NDCSP at that time reflected MCDI's decision to expand its involvement in child survival activities worldwide, and therefore the NDCSP's activities were designed to be replicable by other similar programs that were planned for the region and elsewhere. Since the inception of the NDCSP, MCDI has initiated child survival projects in Madagascar, Mozambique, and in Bolivia. The NDCSP Project Manager visited MCDI's child survival project in Mozambique to assist the staff there to apply what had been learned in the implementation of the baseline KPC survey in South Africa. He also shared information with his counterparts during a Child Survival Project Managers Meeting at MCDI in 1999. MCDI has also developed a Clinic Service Statistics Data Base using Microsoft ACCESS for use by the NDCSP. This data base will be utilized by MCDI's other child survival projects as well.

During 2000, MCDI's NDCSP was chosen to carry out a pilot study of the MACRO International's new HIV/AIDS component of the KPC 2000 survey. During Phase II, the Project Manager will visit MCDI's new child survival project in Mozambique to advise the staff on implementation of the new KPC survey. Experience gained in the implementation of home-based care interventions focused on OVCs and HIV/AIDS affected families will strengthen MCDI's ability to implement sustainable HIV/AIDS interventions in other CS countries where HIV/AIDS is an emerging priority, i.e. Mozambique, Mali.

In addition, the institutional learning/information sharing process of MCDI is facilitated by the Child Survival Support Team (CSST) management structure, which provides a venue to disseminate lessons learned internally (HO) as well as to the field teams. MCDI's experience in the design of community-based financing schemes for example is being applied in Mozambique and Bolivia. The Child Survival Technical Advisory Group facilitates the sharing of information between the International and Domestic Divisions of MCD.

*Strengthening the Local Partners:* MCDI plans to build capacity at three levels of the health care system: the District Health System (specifically the DHSMT), the health care providers and local NGOs serving the District, and the community.

**The DHSMT will be trained in:**

- Use of HIS data for performance monitoring, tracking disease outbreaks, and resource deployment planning.
- Finding blockages in the supplies and logistics systems, and strategies for ensuring regular flows of drugs and materials.
- Identifying priority areas for health messages and mounting an effective BCC campaign using proven behavior change techniques including those developed by DramAidE.
- (In collaboration with the provincial HRD office), IMCI training at the district level.
- Financial management, development of budgets, and resource monitoring.

In facilities providing child health services, Phase II will establish a “critical mass” of personnel who are trained in recommended procedures and protocols. When only one staff member is trained in IMCI (as is now the case in some clinics) s/he may not possess sufficient influence to permanently alter traditional procedures (such as vertical provision of services). What is more, if health care providers are to serve as continuing communication channels capable of transmitting key messages to mothers after MCDI has ceased to do so, they must receive training in counseling and communication skills. Therefore, the following is planned:

**Training for Facility-Based Nurses:**

- Basic IMCI training for additional personnel and all facilities new to the District; IMCI service management and re-organization training for all facilities.
- Face-to-face counseling skills, clear and persuasive communication with mothers, and STI/HIV/AIDS counseling. The latter will include counseling skills aimed at discouraging abandonment of children by HIV-positive mothers (an increasingly common problem).

Community participation, however, is essential to sustaining improvements introduced by MCDI over the long term; particularly those related to care and support of children affected by AIDS. The CHCs will be the structures that plan and monitor NDCSP-initiated activities after the close of the Project. Currently, they do not have the organizational capacity to carry out the activities they are planning, much less to sustain them without MCDI assistance. The proposed training topics for the CHCs are therefore the following:

**Training for Community Health Committees:**

- Organizational planning, financial management, realistic scheduling of activities, record-keeping and monitoring of results.
- Health communication and BCC skills (identifying priority messages and dissemination channels, pre-testing and revising messages, and evaluation of results).

In addition, the Diakonia Council of Churches, together with MCDI, will build the capabilities of religious leaders to plan and carry out HIV/AIDS-related programs among their parishioners. This will establish a permanent linkage whereby Ndwedwe church groups can turn to Diakonia for programmatic assistance when needed. The NDCSP’s partner organizations will develop the skills required to serve as resources for each other and for the community after MCDI withdraws. For example, Oakford staff members will participate in the training activities that the NDCSP develops for TREE, facility-based nurses and the DHSMT. Oakford will thereby become a center of excellence and a local resource in organizational, counseling and home-based care skills.

As part its strengthening of local partners, MCDI is supporting the Valley Trust in its efforts to improve access to care within the district through the construction of primary health care centers with the active participation of CHCs and other community members.

*The NDCSP's Devolution Strategy and Process:* The NDCSP will begin preparing for devolution from the outset by joining its efforts with those of other organizations and personnel. The DHSMT has already taken over the responsibility of collecting information on a monthly basis (begun by the NDCSP) and some CHCs have begun holding regular meetings independent of the NDCSP. Some training programs will be conducted by MCDI's Training Coordinator, but others will be implemented by trainers from partner organizations such as DramAidE, Sinisizo, and the Diakonia Council of Churches. MCDI encourages local partners to act as the primary implementers of jointly planned activities, in so far as they are able to do so. This policy will facilitate a smooth hand-over process at the completion of the Project. The transfer of activities will take place on the following schedule:

- Year 1 and 2: Community-level activities are carried out by community volunteers (CHC members, TBAs and HBCVs) with MCDI training and technical assistance. Members of the DHSMT develop and utilize management and supervisory tools with MCDI participation and oversight, and participate with NDCSP in development of community-based HIS. CHCs maintain orphans registers and monitor condition of OVCs, while CHWs begin a community-based HIS, under supervision of MCDI.
- Year 3: A member of the DHS management team will be appointed to accompany the NDCSP Community Organizers on all meetings and activities with the CHCs and CHWs. The DHS BCC committee participates with DramAidE in organizing a School Health Promotion Club. The PEP coordinator will assume full supervisory responsibility for PEP training in all clinics. CHCs will assume responsibility for liaison with Dept. of Welfare to obtain foster care grants for OVCs; and will monitor condition of OVCs independently.
- Year 4: CHCs will initiate fund-raising activities under MCDI guidance. DHS appointee will assume full supervisory responsibility for CHCs and will independently supervise quality of IMCI activities in clinics. DHS team takes control of CHWs and the community-based HIS. Three School Health Clubs will be organized by the DHS team without input from DramAidE.

*Cost Recovery:* At present, the provision of free health services for all children under the age of six and pregnant women are a cornerstone of the government's effort to extend adequate health care to the disadvantaged majority. In most of Ndwedwe, the DOH clinics are the only option, since no private medical services exist within the District's boundaries. Oakford Clinic, on Ndwedwe's eastern periphery, is a Catholic mission facility that charges a small fee for consultations. Oakford delivers a high volume of services despite their fee policy. Nevertheless, while MCDI stands ready to assist if government policy should change in a direction that is friendly to cost recovery initiatives, it is not possible to attempt to introduce such initiatives to the DOH system while the present policy stands.

In order to address the increasing number of persons affected by HIV/AIDS, the government and communities are turning to home based care programs **without a reliable sense of the true costs associated with such a strategy**. A cost-effectiveness study for the home-based care program in the NDCSP-cost extension area, will be implemented by MCDI. This study will examine the actual cost associated with providing care for people at home who are affected by HIV/AIDS. In addition, this study will provide local community members with data necessary to apply for either private or public funding that will enable the HBC programs to continue with local resources. This study will begin in March 2002 in collaboration with the University of Natal, Department of Economics. MCDI's Health Economist will direct this study using research

assistants and graduate students from the university. This collaboration will provide a sustainable resource to the DOH to carry out similar studies when policy-change regarding fees evolves.

The capacity building objectives, indicators and planned activities for these three levels are as follows:

**Table 3: Capacity Building Objectives, Indicators and Planned Activities**

Objectives	Indicators	Measurements	Activities
<b>DHSMT</b>			
1. The DHSMT will utilize service statistics to carry out monthly assessments of all health care facilities serving Ndwedwe District by the EOP	Percentage of health facilities that have been assessed monthly using available service statistics	Monthly assessment produced for each health facility	Participatory management training by NDCSP Project Manager
2. The DHSMT will be able to develop at least one appropriate supervisory tool (e.g. supervisory checklists) for Ndwedwe health care facilities by the EOP	Number of appropriate supervisory tools developed by the EOP	Number of appropriate supervisory tools developed	Participatory management training by NDCSP Project Manager
3. The DHSMT will learn the skills necessary to mount at least two effective BCC campaigns in schools based on the DramAidE model of presentation by the EOP	The number of School Health Promotion Clubs organized under the supervision of DramAidE by the EOP	Number of School Health Promotion Clubs established	Training of DHSMT members in health communication and counseling skills by NDCSP; joint participation of DHSMT and DramAidE in the organization of School Health Promotion Clubs.
4. The DHSMT will demonstrate an increased understanding of how to effectively mount at least two effective BCC campaign in schools based on the DramAidE model of presentation.	Peer review, observation, survey, focus group discussions	The survey, the focus group questions, the observation sheet	Training of DHSMT members in health communication and counseling skills by NDCSP; joint participation of DHSMT and DramAidE in the organization of School Health Promotion Clubs.
<b>Health Care Providers</b>			
1. By the EOP, all health care providers will be trained in IMCI	Percent of health care providers trained in IMCI	Training attendance logs	IMCI training, supervisory training
2. By the EOP, 75% of service providers will follow the IMCI protocol accurately	Percent of service providers who follow the IMCI protocol accurately	Monthly supervisory visits with checklists	IMCI training, supervisory training
3. By the EOP, all personnel administering STI/HIV tests will conduct counseling before testing and upon informing patients of the results	Percent of personnel administering STI/HIV tests who counsel before testing and upon informing patients of the results	Observation and supervisory visits	Training workshops on face-to-face counseling skills; training on HIV/AIDS counseling aimed at preventing abandonment of children by HIV-positive mothers.
<b>Community Level</b>			
1. By the EOP, all CHCs will establish an effective organization by developing a	Percentage of CHCs that establish an effective organization by	Observations with checklists	Organizational training of CHC members by NDCSP/DHSMT

<b>Objectives</b>	<b>Indicators</b>	<b>Measurements</b>	<b>Activities</b>
constitution, electing officers, assigning tasks, creating monthly work-plans, and maintaining monthly records to monitor results.	developing a constitution, electing officers, assigning tasks, creating monthly work-plans, and maintaining monthly records to monitor results.		
2. By the EOP, all CHCs will develop a BCC campaign and present it to the community.	Percentage of CHCs that develop a BCC campaign and present it to the community.	Observations	Train CHC members in IEC/BCC skills
<b>Local NGO Partners</b>			
1. By the EOP, all TREE's Area Managers and Coordinators will be able to train crèche operators in universal precautions, growth monitoring, early recognition of OIs, and psycho-social needs of children affected by AIDS.	Percentage of TREE's, Area Managers and Coordinators who train crèche operators in universal precautions, growth monitoring, early recognition of OIs, and psycho-social needs of children affected by AIDS.	Training records	Sinisizo/NDCSP train TREE's Area Managers and Coordinators. (TOT).
2. By the EOP, all Oakford Clinic staff members will be able to counsel PLWA and OVCs, and to teach basic home-based care procedures to their families.	Percentage of Oakford Clinic staff members who will be able to counsel PLWA and OVCs, and to teach basic home-based care procedures to their families.	Observations	Home-based care training for TREE, counseling training for facility-based nurses (Oakford staff participates)
3. By the EOP, measurable improvements will occur in the NGOs' capacity areas initially assessed as deficient through the OCAs.	The capacity area improvements in OCA	Annual OCA scores	Implementation of capacity-building plans appropriate to each NGO

In addition, MCDI will work with its partners to train other community-level personnel such as the HBCVs and religious leaders. Through collaboration between MCDI and Sinosizo, a Roman Catholic NGO doing TB work in the community, the HBCVs will receive follow-up training in counseling and clinical skills, and additional HBCVs will be trained for the new area as needed. The Diakonia Council of Churches will work with the NDCSP to train and motivate religious leaders throughout Ndwedwe to develop programs to assist children in their parishes who are affected by AIDS.

***Capacity Assessment and Evaluation of Training Effectiveness:*** A training needs assessment will be conducted prior to each training session to ensure that the planned training is appropriate to the knowledge and understanding level of the local partners, that it fills existing knowledge gaps, and does not duplicate what is already known. During the final year of Phase I, MCDI carried out preliminary facility assessments (including an inventory of essential drugs and equipment) in the health facilities of the district. With DramAidE and TREE, an institutional

strength assessment was implemented using an instrument designed for use in South Africa.<sup>6</sup> The results of these assessments will be compared with final assessments using the same instruments in year 4.

IMCI assessment checklists from WHO have been adapted by the DOH for KZN for evaluation purposes. They were used in the initial assessments by the DOH HRD supervisory teams that visited the Sub-District twice during Phase I. They will continue to be used in Phase II, but their use will be expanded to district-level supervisors.

On the first day of each training session, a pre-test will be administered to establish a baseline. After the session, post-tests will be administered and results will be compared with those of the pre-test. Comparisons will be made on an individual basis, to assess the extent to which each trainee improves his/her score, and the difference will be compared to a pre-set standard to determine the number of trainees who attained an acceptable score. If fewer than 75% do so, then a refresher training will be scheduled to reinforce trainees' understanding. A month after training, the NDCSP Training Coordinator will visit all trainees to solicit questions and discuss problems that have arisen in the course of implementing the new training. If significant problems are encountered with any cohort of trainees, plans for refresher training will be developed. The Training Coordinator will continue to visit the health facilities quarterly to monitor skills retention, and the Project Manager will carry out the same function in monthly meetings with the DHSMT. The two Community Organizers will be responsible for monitoring the outcome of training received by the CHCS.

The NDCSP recently (December 2000) completed baseline assessments of three of its local partners' organizational capacity (Oakford Clinic, TREE, and DRAMAIDE). The instrument used was commissioned by USAID South Africa to provide NGOs with a framework for the systematic evaluation of their organizational processes, structures, and skills.<sup>7</sup> This instrument, administered by the NDCSP, dealt with the four following aspects of organizational functioning: strategic direction, operational management, human resources, and feedback. The assessment revealed the following:

The Oakford Clinic is staffed with four professional nurses and one nurse midwife (who is an enrolled nurse). Although the clinic is private, it receives some support from the government. For example, the staff salaries are partly subsidized by the government and clinic staff participates in government training workshops. The nearest referral facility is Osindiswini Hospital, a government hospital that is four kilometers away. The matron at Oakford reported that routine deliveries were discontinued one and one half years ago, due to the fact that Osindiswini Hospital refused to accept referrals from Oakford for complicated obstetric cases. Currently, staff at Oakford only performs emergency deliveries in the clinic. In addition, the clinic's nurses travel with the clinic's private ambulance into the district and transport women to Osindiswini Hospital for delivery. The matron stated that a government supervisor is supposed to make supervision visits, however this does not occur. The NDCSP identified one of the biggest challenges of

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<sup>6</sup> How Is Your Organization Doing? A Guide for the Assessment of Organizational Capacity. Human Sciences Research Council with support from USAID/RSA. Pretoria: 1996.

<sup>7</sup> Strategic Planning Workbook for Non-Profit Organizations (Miller Foundation); Partnering to Build and Measure Organizational Capacity (CRWR Committee); MOST Management and Organizational Sustainability Tool (MSH: Participatory Self Assessment of NGO Capacity, INTRAC).

treating patients at Oakford is related to difficulties with the nearest referral hospital (Osindiswini) accepting referrals.

The director of TREE, together with NDCSP identified three main areas where NDCSP can assist TREE in building its capacity. First, TREE needs to increase its understanding of how the community should best cope with children under the age of 7 traumatized by family members who become sick or die from AIDS. TREE would like to integrate psychosocial support of young children into its ongoing training programs for teachers. Second, NDCSP could collaborate with TREE to help build capacity in the monitoring and evaluation of action plans in the field regions. In fact, field staff at TREE have requested “spot checking” of their performance. One of TREE’s strengths lies in its ability to reach out to very remote areas by having staff based in the communities that they serve. However, because the field regions are very spread out, communication between the regions and between each region and the headquarters is a problem. Third, TREE identified a lack training in management (of resources and personnel), administration, technical skills, and personnel development for its field staff, and would like NDCSP’s help in building such capacities.

The project manager at DramAidE identified as the biggest weakness, the absence of a detailed strategic plan (short, mid, and long term) developed with input from all staff. In addition, DramAidE’s management feels that field staff need to be included more in the development of action plans for particular projects.

These organizational assessments of the NDCSP’s local partners (to include the Diakonia Council of Churches, Sinosizo and Vuleka Productions during Phase II) will be repeated (as self-assessment exercises following the initial assessment) on an annual basis. The ultimate goal of these assessments will be to ensure the continued effectiveness and sustainability of these groups following the completion of the project.

*Constraints to Capacity Building MCDI anticipates:* a number of possible constraints to its capacity-building plans with respect to its primary partner, the DOH. Although the DHSMT has been in existence since 1998, it has suffered from insufficient support and unclear boundaries and mandates, and so there has some difficulty in obtaining the consistent commitment needed to fully develop the management skills necessary to establishing a sustainable DHS. Although a District Health Information System (DHIS) has now been established with technical assistance from MCDI, the DHSMT has not reached the stage of utilizing this information for planning, decision-making or monitoring. The Unicity plan, which will radically change District boundaries, has added to the confusion and lack of confidence. Once the new boundaries are clearly designated at the end of 2000, however, the roles and responsibilities of the DHS should be clarified and finalized, allowing the DHSMT and NDCSP to move forward in identifying the procedures and protocols that will be followed and the skills that will be needed to implement them. At that time, the Project Manager and Training Coordinator will draw up a training plan jointly with the DHSMT.

At the health care provider level, capabilities have been significantly improved in the clinics and hospitals included in the NDCSP Phase I through the introduction of IMCI and PEP training. However, the new Phase II health care facilities have not yet been trained. In addition, recent supervisory visits to the Phase I facilities, where MCH personnel received IMCI training, indicate that while they all have begun to implement IMCI, progress is uneven and none have fully

completed the transition to the integrated system. Although the clinical training program may have transmitted adequate clinical skills, the re-organization of services, supplies and schedules has presented a greater problem than was anticipated. Further IMCI training is planned for Phase II, therefore, to bring the new clinics and hospital up to speed, and to train all providers in the service management and organizational skills needed to move from a vertical to an integrated system of child health services. In addition, a recent NDCSP training needs assessment revealed that counseling skills in clinics were particularly weak. Particularly in view of the Districts burgeoning HIV/AIDS rates, health care providers' counseling capabilities are vitally important, and so the NDCSP's training plan for Phase II includes training by MCDI's Training Coordinator (a trained psychiatric nurse) of area nurses in counseling skills.

At the community level, seven CHCs have been constituted with the assistance of the NDCSP, and seven more are planned for Phase II. A South African NGO, the National Progressive Primary Health Care Network (NPPHCN) conducted a management training course for one member of each CHC in KZN. Nevertheless, NDCSP has learned that not all Ndwedwe CHCs include a trained person; and all are weak in organizational and planning skills. The Ndwedwe CHCs have now developed action plans for health, but lack the skills needed to carry them out and monitor the results. Most of these action plans include a health information or behavior change communication initiative, but CHC members have no relevant skills or experience. Phase II, therefore, includes plans to implement a program of ongoing institutional development for the CHCs that will include organization management and design and implementation of specific activities.

MCDI is fully confident that the additional training that is planned for Phase II will be an effective approach to addressing the current constraints to capacity building efforts.

## **H. Sustainability**

Sustainability to the NDCSP means that not only will measurable improvements be achieved in health care delivery and community child health practices, but these improvements will be attained by strengthening new and existing systems and structures. These systems and structures, at the health system and community levels, are designed to persist and be active after MCDI has completed its work in Ndwedwe District. In order for this to happen, new skills must be transferred and current skills and capabilities must be strengthened and updated for both public and private sector partners. It is well understood that sustainability cannot be achieved unless the interventions selected for emphasis are those that local partners and stakeholders consider to be important. Nevertheless, stakeholders must be educated about health issues and priorities to which they have had little exposure, in order to ensure that they are able to make informed decisions and choices. In addition, sustainability means that strong links and networks must be established between public and private institutions and organizations that are carrying out related and complementary activities. The NDCSP, as a neutral outsider, is in a position to broker and facilitate these links and to ensure that redundancies or rivalries are avoided while synergies are achieved.

With regard to the health care system, the NDCSP is improving sustainability by assisting the DOH to create an integrated and centralized local system of health care delivery. The South African health system was highly fragmented during the apartheid era, and efforts to knit it into a

single coherent, equitable system are still underway. No district health system existed in Ndwedwe at the commencement of the NDCSP. Throughout Phase I and now during Phase II, the NDCSP has been a strong player and an active partner in the development of appropriate local systems for health care delivery, and for health monitoring and planning. The challenge that remains is to make the new system sustainable in view of the facts that HIV/AIDS rates are very high and all MCH services are now provided free by the DOH. This policy is politically popular and unlikely to change in the near future. Nevertheless, MCDI stands ready to assist the DOH to introduce an appropriate cost-recovery initiative if the strain of the epidemic renders the government unable to provide free services at any time during the next four years.

At the community level, sustainability includes the establishment of cadres of trained and motivated providers who can act as resources for their communities on a continuing basis. Currently, the government provides financial compensation only for Community Health Workers. All other community based providers are volunteers. These include Community Health Committee members, Home Based Care Volunteers, trained TBAs, and others. In addition to technical skills (such as HBC skills or safe birth practices), these volunteers gain skills in organization, identification of priorities, monitoring and record-keeping, and use of qualitative/PRA information in decision-making. Not all these volunteers will continue to organize and carry out activities after the termination of the NDCSP – although many will do so - - but it is expected that even those who are not proactive will be sources of information and referral that community members can consult when health questions arise. MCDI's Senior Health Economist, Dr Christopher Schwabe will carry out a cost-effectiveness study during Phase II of the project's home-based care activities to gain insight into the sustainability of this community-based approach to care provision.

By the end of the Project, the NDCSP expects to have established the following:

- Sustainability Objective 1: By EOP, 80% of the CHCs established with NDCSP assistance will be functioning independently to carry out health, child survival and AIDS-related activities.
- Sustainability Objective 2: Subdistrict health system procedures and institutions established with NDCSP assistance will be implemented in 100% of health care facilities serving Ndwedwe Subdistrict after EOP.
- Sustainability Objective 3: By EOP, the supervision of the Home Based Care Volunteers will have been handed over to mobile and fixed site clinic personnel, who will make regular supervisory visits independently..
- Sustainability Objective 4: After EOP, the Ndwedwe District CHWs will be managed and supervised by trained staff members of an Ndwedwe area NGO under contract to the DHSMT.
- Sustainability Objective 5: 0% of health care facilities experience stock-outs of essential drug list and IMCI drugs by the EOP.
- Sustainability Objective 6: 100% of School Health Clubs established by DramAidE will have independently catalyzed the organization of a similar Club in a sister school by EOP.

These objectives will be achieved by the Project's "leave in place" plans, including the following:

*Community Structures:* The Project will leave a number of community volunteers in place, including trained HBCVs, CHWs and TBAs. Its most important community structure, however, is the Community Health Committee. The CHCs received preliminary organizational training from the National Progressive Primary Health Care Network (NPPHCN), and they are being helped to put this training into practice by the NDCSP Community Liaison Specialists. During Phase I, they led the CHCs in a series of PRA exercises designed to help them choose their priorities and develop an action plan. During Phase II, by participating with MCDI in the development of comprehensive behavior change strategies surrounding the IMCI Key Family Practices, the CHCs will acquire skills needed to execute behavior change initiatives independently. Sustainability of the CHCs will be achieved by improving the technical and supervisory capabilities of two Community Health Facilitators who have been assigned from among the staff nurses of Montebello Hospital to the task of supervising the Ndwedwe area CHCs. The Facilitators are still undergoing training for community work, but they are expected to be fully trained and skilled by the end of the NDCSP. *The formal integration of CHWs (an potentially HBCVs) into the MOH service delivery system (CHWs are now paid by the MOH) enhances the support mechanisms that CHCs will need to remain viable.*

*Local Partners:* Maintaining coverage levels and making key health sector decisions will be the continuing responsibility of the District (or Subdistrict) Health System Management Team. The NDCSP is participating in the development of the DHSMT's plans for the district and subdistrict health systems, so as to ensure that the NDCSP's maternal/child health and HIV/AIDS objectives will continue to be priorities for the new system. NDCSP staff members are also strengthening the DHSMT's capacity to carry out the activities deemed essential to meeting those objectives; and those skills and abilities will be institutionalized by the close of the Project. Local NGO partners are also gaining new abilities that will become part of their repertoire of skills. Partner-to-partner transfers of skills will be one of the Project's key methods of expanding the capabilities of partner organizations. The NDCSP is establishing links between its partners (such as TREE and Doctors for Life) that will enable them to trade information, skills and materials. These new linkages will enable them to sustain the new activities and initiatives they undertake in collaboration with MCDI.

*Sustainability Measurement and Monitoring:* The Project's progress toward its sustainability objectives will be monitored with reference to the benchmarks in its phase-out plan (below). If local partners have assumed their designated functions by the specified date, then it will be assumed that the NDCSP is meeting its sustainability goals.

*MCDI's Organizational Development Approach:* MCDI will assist its partners to improve their sustainability by helping them to identify current weaknesses and plan training programs or systems development initiatives to correct those weaknesses. This component of the NDCSP began in 1998, when MCDI itself carried out a variety of organizational self-assessment exercises during a series of Strategic Planning Workshops held at its headquarters in Maine. Also during Phase I, two of MCDI's partners (TREE and DramAide) participated with an NDCSP consultant in an OCA exercise. Issues that require attention were highlighted in these assessments, and a series of recommendations were developed. These included suggestions for improving sustainability – such as developing a long-term strategic plan and exploring funding opportunities other than the provincial government.

This technical assistance package will leave the Project's collaborating partners, including each level of the health care system, with new or improved skills and capabilities that will structure their future methods and procedures after the end of the Project. To establish a sustainable DHS, for example, the DHS management team will be trained to effectively plan, monitor and evaluate the delivery of health care without the guidance of MCDI. At the level of the health facilities, facility-based nurses are being trained to carry out IMCI diagnosis and treatment protocols, and a PEP Coordinator is being trained to independently guide and supervise the nurse-midwives who are using the PEP modules to improve their skills. Facility-based staff, particularly those staffing mobile clinics, will also be trained in supervisory techniques and tools so they can assume the supervision of the HBCVs. In short, in-service and on-the-job training will be central to the Project's effort to achieve sustainable improvements in its partner organizations.

*The NDCSP's Devolution Strategy and Process:* The NDCSP began preparing for devolution from the outset by joining its efforts with those of other organizations and personnel. The DHSMT has already taken over the responsibility of collecting information on a monthly basis (begun by the NDCSP) and some CHCs have begun holding regular meetings independent of the NDCSP. Some training programs will be conducted by MCDI's Training Coordinator, but others will be implemented by trainers from partner organizations such as DramAidE, TREE and the Diakonia Council of Churches. MCDI encourages local partners to act as the primary implementers of jointly planned activities, in so far as they are able to do so. This policy will facilitate a smooth hand-over process at the completion of the Project. A concern expressed in the application review comments focused on the strong volunteer component of the project. The recent change in MOH policy to embrace CHWs as formal community based providers of care (with the possibility that HBCVs will also be similarly integrated) strengthens the potential of these providers to remain viable without project support (at least their financial sustainability). The transfer of activities will take place on the following schedule:

- Year 1 and 2: Community-level activities are carried out by community volunteers (CHC members, trained TBAs and HBCVs) with MCDI training and technical assistance. Members of the DHSMT develop and utilize management and supervisory tools with MCDI participation and oversight, and participate with NDCSP in development of community-based HIS. CHCs maintain orphans registers and monitor condition of OVCs, while CHWs will begin utilizing the community-based HIS, under supervision of MCDI. Model crèche caregivers will be trained by Doctors for Life and TREE to provide care for CABA. Two Community Health Facilitators complete their training in supervision of the CHCs.
- Year 3: The Community Health Facilitators, now fully trained, accompany the NDCSP Community Liaison Specialists to all meetings and activities with the CHCs and CHWs. The DHS BCC committee participates with DramAidE in organizing a School Health Promotion Club. The PEP coordinator will assume full supervisory responsibility for PEP training in all clinics. CHCs will assume responsibility for liaison with Dept. of Welfare to obtain foster care grants for OVCs; and will monitor condition of OVCs independently. The first model crèche receive continuing support from Doctors for Life, and additional crèches will be initiated.
- Year 4: CHCs initiates fund-raising activities under MCDI guidance. The Community Health Facilitators and CHWs assume full supervisory responsibility for CHCs. The DHS team independently supervises the quality of IMCI activities in clinics and takes control of the community-based HIS. Three School Health Clubs are organized by the DHS team without input from DramAidE. CHCs maintain orphans registers and monitor condition of OVCs,

while CHWs begin a community-based HIS, under supervision of MCDI. Doctors for Life supervise and support all model crèches on a continuing basis, and the crèche model is formalized for submission to DOH for possible expansion within the province.

*Assumptions and Constraints:* The Sustainability and Phase-Out Plans above are based on the assumption that the functions, structures and systems of a district health system will crystallize by the end of 2003. There is every reason to believe this will be the case, since the DOH is firmly committed to building an integrated, decentralized and equitable local system. Nevertheless, the exact level at which various functions and responsibilities will be located is still unclear. Once the system is fully instituted, some modifications in the sustainability objectives are to be expected. These modifications should not be extensive, however, and MCDI is fully prepared to respond to any changes in the emerging district health system as necessary.

*Scaling Up of NDCSP Interventions:* The NDCSP is working with the District Health System team on a weekly basis, and the DHSMT participates in the design and planning of MCDI's pilot activities. Activities that are pilot tested successfully by MCDI are therefore included in the DHSMT's plans for the District as a matter of course. Several of its initiatives are also appropriate for scaling up to the provincial level (and to other provinces or to the national level in some cases). These include the following:

- **Model Crèche Program:** The government of South Africa is seeking viable means of meeting the needs of increasing numbers of orphans and children affected by AIDS. It is preferred that they remain in their home communities, but some do not have a capable full-time caregiver within their immediate kin network. For many of these children, the day-care arrangement that will be pilot tested by the NDCSP (in collaboration with Doctors for Life and TREE) could make it possible for a neighbor or elderly relative to assume responsibility for them. If the model crèches established in Ndwedwe prove to be successful in this regard, MCDI will develop a formal model plan that can be applied throughout the province or more broadly.
- **The Integrated Management of Childhood Illness (IMCI):** Ndwedwe District was designated as one of the pilot districts for the implementation of IMCI during Phase I of the NDCSP. During Phase II, the community component of IMCI will be initiated by the NDCSP in coordination with the Provincial IMCI Task Team. The NDCSP will contribute to the body of lessons learned from the pilot districts; and these insights will be applied to the development and deployment of IMCI throughout KwaZulu-Natal.
- **NGO Management of CHWs:** The DOH has made a number of small grants available to NGOs for supervision and management of CHWs. There is no appropriate NGO in Ndwedwe Subdistrict. NDCSP, along with the Valley Trust, will assist the DHSMT to instigate the coalescence of several indigenous CBOs into one larger NGO that will be capable of managing the Ndwedwe area CHWs on a sustainable basis. If this effort is successful, MCDI will develop a set of guidelines outlining the technical assistance strategy that was implemented. The purpose of the guidelines will be to assist other sub-districts that are lacking suitable NGOs to catalyze the development of a small local organization and train its staff to manage and supervise CHWs.
- **Prenatal STI/HIV/AIDS Screening:** The DHSMT has encouraged the project to assist it in ensuring that all facilities are capable of carrying out STI/HIV/AIDS prenatal screening using the rapid low cost diagnostic technology introduced by the project.

- **HBCVs Monitoring and Supervision:** The only network of HBCVs currently supervised and monitored using a standardized protocol are those in the NDCSP area. The regional AIDS coordinator has commended the project for this activity and requested assistance in expanding its application.
- **Expanded Integration of HIV/AIDS and TB Care and Prevention:** With its partner Sinosizo, the Project will continue to increase the numbers of HBCVs who are trained in DOTS.
- **Expanding Access to Short-Course Nevirapine Treatment of Mothers:** With the recent policy change in KwaZulu Natal the Project is ideally positioned to prevent MTCT of HIV by ensuring the availability of nevirapine at health facilities (MCDI submitted a proposal to a donor agency for the free provision of nevirapine).

## **I. Behavior Change Strategies**

During Phase II of the project, an enhanced BCC strategy will be developed to increase health education messages and positive health practices in the District.

### *Formative Research:*

The NDCSP plans to implement a comprehensive behavior change assessment program that will include both qualitative research and mini-surveys. Information collected through these activities will supplement data the Project has already acquired through both quantitative and qualitative research activities carried out in the past two years. The following research initiative was aimed at establishing priority areas for behavior change activities, assessing existing practices and beliefs, and identifying influencing factors that constitute barriers to and opportunities for behavior change. It includes the following:

- **KPC 2000:** The NDCSP was the site of a pilot test of the KPC 2000. The study included a KPC survey for Ndwedwe Sub-District designed to assess knowledge, attitudes, coverage and practices on child survival issues relevant to project interventions, including the HIV/AIDS subproject that was set to commence in early 2000. As a complement to the sample survey, project staff in collaboration with DramAidE implemented an in-depth qualitative behavior change assessment of individual and community attitudes and practices related to HIV/AIDS. The qualitative behavior change assessment used focus group discussions and semi-structured interview methods to examine factors contributing to the runaway spread of HIV in the project area, including community sexual norms and constraints to condom use; and to assess community attitudes toward and willingness to provide care for PLWAs and CABA. The combined quantitative-qualitative study identified audience segments in need of special attention (e.g. non-maternal caregivers), and offered recommendations for behavior change strategies (such as collaboration with interested church groups).

To expand the NDCSP's knowledge base regarding existing practices and to provide a basis for the development of an effective behavior change strategy, additional formative research activities are planned:

- **IMCI Community Component GAPS Analysis:** During the final year of Phase I, the NDCSP pilot tested a GAPS Analysis exercise in two communities of the Sub-District. The GAPS

Analysis, based on a method under development by the KZN Provincial AIDS Task Team and World Vision, is a technique for identifying priority focal areas by assessing the degree to which prevailing community practices deviate from a set of Key Family Practices being promoted as part of the community component of IMCI. The pilot test established that the GAPS Analysis, in addition to spotlighting problem areas for BCS emphasis, was unexpectedly useful in identifying factors that commonly impede the adoption of improved practices. An NDCSP medical anthropologist consultant is now in the process of formalizing this function of the GAPS Analysis and expanding it into a comprehensive behavior change assessment tool for promoting improved Key Family Practices (including the HIV/AIDS-related practices designated by the Provincial AIDS Task Team as appropriate to the needs of KZN). The project's Community Liaison staff will be trained in the use of the instrument so that they can lead the Community Health Workers in carrying out a GAPS Analysis exercise in all clinic catchment areas of the expanded project area. The expected outcome of the GAPS Analysis exercises will be the identification of: 1) Priority Practices for special emphasis during Phase II, and 2) factors currently limiting or supporting the households' ability to adopt the Priority Practices.

The NDCSP will use this approach to gain further insight into both its health facility and community IMCI components. For example, a lesson learned from Phase I is that both communities and nurses resist some aspects of the IMCI protocol; specifically those that discourage the distribution of unnecessary palliatives and antibiotics.

- The NDCSP Nurse Wealth Ranking for CABA Needs Assessment: Community Health Committees throughout the project area are in the process of compiling and/or updating Orphans Registers that monitor the households caring for children affected by AIDS (CABA) in their communities. A purpose of these registers is to identify CABA households with the highest level of need for community and NDCSP assistance (including organization and training related to income-generating activities). Since cash income alone is seldom an adequate indicator of material well-being in rural Ndwedwe, the NDCSP is now adapting a PRA technique (the Wealth Ranking Exercise) to enable CHCs to select the neediest CABA households for special assistance. Wealth Ranking for this purpose was pilot tested in Shangase Tribal Authority in May 2001 with encouraging results. To broaden the use of this technique to the rest of the project area, the NDCSP is developing a formalized Wealth Ranking Instrument and guidelines for use. NDCSP Community Liaison staff will be trained as master trainers in use of the instrument. They in turn will train CHWs to carry out Wealth Ranking exercises in all communities with Orphans Registers, and they will lead the CHCs in choosing high-need households based on the results of the exercise.
- Doer – Non Doer Analysis: For the three highest priority Key Family Practices identified by the GAPS Analysis and Community PRA, the NDCSP will carry out a Doer – Non Doer Analysis derived from the BEHAVE Framework. In one community from each clinic catchment area, the NDCSP Community Liaison staff in collaboration with the CHW and CHC will identify a set of 21 mothers or caregivers who “do” each of the recommended practices, and an equal number who are “non doers.” The two groups will be compared on key parameters, including knowledge of the problem, perceived risk, and social and environmental factors, in order to achieve insight into the question of which of these factors may be critical determinants of the behavior in question. The outcome of the Analysis will be

to identify the pivotal factors that must be attacked if the NDCSP's behavior change strategy is to be effective.

### **Development of the Behavior Change Strategy**

BC Model and Overarching Techniques: In February 2002, NDCSP staff participated in a workshop implemented by the CORE Group and AED on the BEHAVE Framework for Behavior Change Programming. The four strategic planning elements of the BEHAVE Framework include analysis of the audience, behaviors (of the audience), key factors that help the audience take action (and barriers which prevent actions), and activities which will maximize the benefits and minimize the barriers that matter to the target audience. A senior staff member attended the workshop and is now prepared to implement the BEHAVE Framework in the development of the NDCSP's BCS. She will oversee the formative research activities described in the section above, and will disseminate the results to the local partner organizations (the DHSMT, DramAidE, the Diakonia Council of Churches, etc.) who will collaborate with the NDCSP on implementing the project's behavior change activities.

Multi-level Behavior Change Strategies: The NDCSP's multi-level behavior change strategies will be centered around the Integrated Management of Childhood Illness; particularly its health facility and community components. For example, a lesson learned from Phase I is that both communities and nurses resist some aspects of the IMCI protocol; specifically those that discourage the distribution of unnecessary palliatives and antibiotics. The NDCSP Nurse Trainer will work closely with the Community Liaison Specialists to improve compliance with the IMCI protocol at both the facility and community levels – 1) by following up on IMCI training for nurses and supervisors with frequent support and reinforcement visits to clinics and 2) by exploring community members' reasons for resisting IMCI and developing a plan to bring their expectations into line with correct treatment algorithms.

The NDCSP's Approach to Behavior Change: The NDCSP's approach to BC involves going beyond information dissemination to embrace a more comprehensive strategy based on identification of the specific factors that influence the adoption of key behaviors. The formative research exercises described above will enable the Project to identify trusted and accessible communication channels, to recognize the language and images most likely to be persuasive, to strengthen and promote the benefits community members believe to be associated with the key behaviors, and to attack the barriers that are impeding adoption. A wide range of individuals and organizations will carry out the behavior change strategy. MCDI staff will collaborate with DOH staff members (including the DHSMT, facility-based nurses, and CHWs), South African NGO partners and local community groups, particularly the CHCs. The CHCs, with assistance from MCDI and the CHWs, will participate in or lead the behavior change assessment exercises such as the GAPS Analysis. Based on the results, they will plan behavior change activities tailored to reflect the key behavioral determinants identified for their own communities.

Among partner NGOS, DramAidE participated in the KPC 2000 qualitative HIV/AIDS assessment, and so it is well positioned to ensure that the findings of that exercise are reflected in the songs, dramas and other activities its School Health Clubs implement to promote healthy, low-risk behavior among school children and out-of school youth. Formative research results will also be shared with the faith-based organizations (Diakonia Council of Churches and Interfaith

AIDS Forum) that are working with the NDCSP to modify the behaviors that are causing the spread of HIV/AIDS in the district. DramAidE, the faith-based organizations, the CHCs and CHWs will all figure in the NDCSP's campaign to establish health-promoting behaviors as social norms in the community, while Project-trained TBAs, Home-Based Care Volunteers, and health workers trained in IMCI will provide information and counseling at the level of the individual client or patient.

Mass communication will take place through community radio and other media outlets. MCDI has made initial contacts with Africa Alive, an umbrella organization that provides technical assistance and training in entertainment education, as well as Vuleka Productions, a local group developing documentaries and other films on the HIV/AIDS epidemic in KwaZulu Natal. These groups will assist the NDCSP to develop an affective communication strategy for disseminating its priority messages through community radio. Although there is no community radio station currently operating in Ndwedwe, the NDCSP has made contact with an Ndwedwe CBO that is eager to initiate a station, with assistance from the NDCSP.

## **J. Quality Assurance**

The primary focus of the NDCSP's quality assurance activities is to ensure that the quality of services available at the clinics and accessed by the mothers/families is optimal. The specific dimensions of quality emphasized include the following:

- (a) To ensure the technical competence of the clinical staff and the community based workers such as CHWs, TBAs, and HBCVs so that they perform effectively
- (b) To ensure that the service delivery of the clinics and the health system is efficient
- (c) To ensure that communities have timely and adequate access to the services provided
- (d) To ensure that clinical services provided are safe
- (e) To ensure that the clinic staff understand the importance of interpersonal relations in effectively communicating to clients
- (f) To ensure that, by the end of Phase II, all nurses who diagnose and treat children under five are trained in IMCI protocols.

The project will work with the DOH to reach these objectives so that optimal quality of care is achieved. Optimal will be defined as the capability of the clinics and community based staff to provide clinical care and make appropriate referrals which are essential in providing timely, appropriate and cost effective practices.

Together with the DOH and community based structures (CHCs, CHWs, TBAs, and HBCVs), the NDCSP will ensure that the inputs, process and outputs for each intervention will be maintained even after the life of the project. Efforts to measure and improve quality of services will be achieved using the following steps and tools:

- a) The NDCSP will work with the DOH in standardizing and establishing a routine supervisory mechanism in place that will help enhance quality.
- b) The project will use supervisory tools to assess performance of clinic staff and provide timely feedback

- c) In partnership with the stakeholders the project will carry out a health facility survey and qualitative research activities
- d) For standardized clinical care all staff will be trained in IMCI. A three-pronged strategy will be ensured: 1) mastery of the clinical algorithm and its associated skills, 2) development of necessary institutional support (equipment, pharmaceuticals, etc.) and 3) implementing HH/C-IMCI
- e) Based on observations made during supervisory visits the project will give on the job training and conduct refresher training on case management practices
- f) Quality of training will be assessed through periodic feedbacks and the project will develop pre- and post-test evaluation tools to monitor the quality of training for TBAs, as well as other community based workers and clinic nurses
- g) The establishment of ORT corners will serve as a key quality indicator in teaching mothers standardized practices.
- h) Surveillance and health promotion data (e.g., on immunizations)
- i) Facility operations management checklists (e.g., for cold chain)
- j) Facility exit interviews to understand mothers/caregivers perceptions of service
- k) A community-based monitoring tool to collect demographic data and epidemiological information at the community level. This will be finalized in collaboration with the DOH based on a review of existing community based monitoring tools in the region (e.g., CHW checklists, orphan registers,) as well as on international models. The community based monitoring tools that will be developed will be pilot tested and used by the CHWs, HBCVs, and TBAs trained by the project. This will result in ownership, increased community participation and decision making at the grassroots level.
- l) The project will negotiate with the DOH for an ambulance at remote clinics to ensure that the mothers/families have access to transport during emergencies.

Supervisory tools that will be used on a continuous and regular basis include:

- a) An orphan register to collect information at the community level and to help ensure that all OVC have access to services.
- b) A TBA referral form for referring a sick woman/mother/child
- c) A patient profile (community based monitoring tool) checklist to measure the home based care services of HBCVS
- d) Policy guidelines on maternal and newborn care
- e) Policy guidelines on HIV/AIDS case management
- f) The IMCI supervisory checklists of (a) facility supports, (b) case management of a sick child and, (c) caregiver interview forms will help maintain quality IMCI management practices at the clinic level
- g) An form to record outpatient cases to estimate the epidemiological data at outpatient clinics and referral form to estimate clients referred to hospitals.

The NDCSP's approach to improving standards of care is through its support of the introduction of IMCI protocols and procedures to Project area clinics and hospitals. The Project has established an IMCI Task Team within the DHSMT, and during Phase II the Task Team will monitor IMCI implementation to ensure that problems identified during Phase I are being effectively addressed.

Community meetings will be held to explore the reasons for community resistance to IMCI and to explain the IMCI protocol to community members. MCDI plans to address the reported drug shortage problem by implementing a pharmaceutical stock management training workshop for personnel from all clinics. As discussed with the DOH, the project will take the initiative to conduct monthly monitoring of clinics using a checklist to ensure that essential drugs are available. This will help to regulate pharmaceutical supplies and ensure efficient logistics management. The provincial pharmacist will be asked to participate in the workshop and to assist with follow-up problem identification and resolution

In addition, workshops will be organized which give community-based providers an opportunity to discuss their work and create a learning opportunity.

## **Section II: Program Management**

### **A. Management Approach**

Management of the NDCSP will be the shared responsibility of the field Project Management Team (PMT) and the home office child survival support team (CSST). The Project Management Team will consist of the MCDI project team members comprised of the Project Manager, the Training Coordinator and the AIDS/PHC Supervisor; a representative from the DHSMT will serve in an advisory capacity. The MCDI Project Manager is currently an appointed member of the DHMT and the District AIDS Coordinating Task Force; his participation on these policy-making and planning bodies ensures an integration of NDCSP activities with those of the DOH and provides a platform for the capacity building objectives directed at the DOH. The PMT will have primary responsibility for maintaining adherence to CS Project guidance and standards, ensuring the integrity of project budgetary allocations and disbursements in the field, coordinating the activities of collaboration partners and promoting the sustainability objectives of the project. The transfer of skills and duties to the local partners of the NDCSP, especially DOH should happen gradually to ensure continuity and sustainability of the project activities. The fourth year of the project will be run entirely by the KZN-DOH personnel and other local partners with limited technical assistance from MCDI country and HO staff.

Members of the HQ CSST regularly attend technical briefings such as those convened by CORE, CSTS, World Bank, PAHO, UNICEF and other donor organizations involved in child survival-related activities. Information from these technical updates is routinely transferred to field staff via email and periodic shipments of documentation. Field staff also provide feedback to HQ on all workshops attended, both in-country and internationally. In addition, MCDI attempts to organize an annual meeting in Washington to coincide with the Global Health Council Meeting or CORE Group annual meeting.

### **B. Human Resources**

The CS Project Manager position will be filled by Dr Farshid Meidany, a Community Health Specialist and Epidemiologist who previously worked with the Provincial Department of Health in the Eastern Cape. The Project Manager will be in routine contact with the Home Office CSST which consists of the Child Survival Coordinator, the Senior Health Advisor, CS Support Staff and the Administrator. See overleaf for the proposed management structure.

In addition to the Project Manager, the core NDCSP team will consist of six key field positions directly supported by the project: (i) the Training Coordinator: Thuli Ngidi, (ii) the AIDS/Primary Health Care Supervisor: Thoko Radebe, (iii) the Home Based Care Trainer: Esme Cakata, (iv) the Community Outreach Organizer: Christopher Mohatsela, v) the Social Worker: Zanele Buthelezi, and vi) the Project Administrator/Bookkeeper: Zandile Myeza. Dr Meidany will have overall responsibility for Child Survival Grant management activities in the field to include the supervision of project staff and the oversight of workplan activities, liaison with national, regional and district-level DOH authorities, and coordination of activities with all local partners. He will work directly with the DHSMT to strengthen its capacity to manage the new district health system, and with partner organizations such as TREE, Oakford and DramAidE to expand these organizations' involvement in HIV/AIDS and MCH/BCC activities.

**INSERT MANAGEMENT STRUCTURE ORGANOGRAM HERE**

He will report to the Home Office Child Survival Coordinator and the **Senior Project Officer**. Farshid Meidany has an MD from the Medical School, Tehran University and an MPH in International Health and Epidemiology from the Johns Hopkins University. He has about 20 years experience in program management as a National HIV/AIDS Control Program Director (WHO/DOH, Equatorial Guinea), District Health Medical Superintendent (Eastern Cape DOH, South Africa) and Head of Epidemiology and Research Unit (Eastern Cape DOH, South Africa). He has vast experience in managing or collaborating with different projects funded by WHO, UNICEF, World Bank, European Union and US AID. He has recently been appointed as the Project Manager for the NDCSP. His cv appears in Annex IV.

The Training Coordinator, Thuli Ngidi, is a nurse-midwife with 30 years of experience in government and NGO service. She has received training as a psychiatric nurse in the UK and recently completed training in South Africa as an HIV/AIDS Counselor. She will have overall responsibility for ensuring that the clinical training of DOH facility based staff is consistent with WHO recommended standards and protocols as well as DOH norms and protocols. She will supervise the implementation of the IMCI and PEP programs in the clinics and hospitals serving the Sub-District. She will monitor the quality of care and, based on systematic observation, suggest additional or refresher training as needed to improve it. She will also be responsible for developing and implementing a training program to improve counseling skills in clinic-based nurses, and to introduce HIV/AIDS counseling to additional facilities as deemed appropriate by the DOH. The AIDS/PHC Supervisor, who is to be appointed, will be a nurse with experience in training Home-Based Care Volunteers. She will supervise, with DHSMT participation, the HBCVs activities in the field and will implement refresher training for them as needed. She will also supervise the HIV/AIDS-related activities of the CHCs and CHWs, and oversee the NDCSP's collaboration with TREE, Oakford, Sinosizo and the Diakonia Council of Churches on developing or expanding their HIV/AIDS programs.

Thoko Rhadebe, the AIDS/PHC Supervisor, and Esme Cakata, the Home Based Care Trainer, are professional nurses with years of experience in community and clinical medicine, monitoring and supervision of health care workers and training Home-Based Care Volunteers. They will supervise, with DHSMT participation, the HBCV activities in the field and will implement refresher training for them as needed. They will also supervise the HIV/AIDS-related activities of the CHCs and CHWs, and oversee the NDCSP's collaboration with TREE, Oakford, Sinosizo and the Diakonia Council of Churches on developing or expanding their HIV/AIDS programs.

The Community Outreach Organizer will coordinate the activities of the Community Health Committees, with assistance from the Project Manager and AIDS/PHC supervisor. Mr. Mohatsela will be responsible for the organization of the new CHCs, including facilitation of PLA/PRA exercises, identification of health priorities and development of an action plan. He will also assist the Project Manager to provide technical assistance to the CHCs in designing BCC campaigns, developing child survival messages and disseminating them to the community. He will also oversee and facilitate income-generating activities, such as facilitating work of the Center for Rural Development of the University of Natal in Ndwedwe District in activities regarding sustainability of the NDCSP project strategies and community self sufficiency.

The Social Worker, Ms Buthelezi, will work with the CHCs on development and updating of the OVCs Registers and on monitoring the condition of children in the Registers. She will establish

liaison between the CHCs and governmental agencies (such as the Dept. of Welfare) the offer foster care grants and other benefits to households affected by HIV/AIDS, in order to ensure that all those who are eligible have assistance in accessing these resources. She will also oversee and facilitate creation of model crèches coordinating activities of by Tree, Doctors for Life, etc., in this project.

The DHSMT and a variety of community volunteers will contribute to NDCSP activities, as well as the Community Health Worker program that is now in the process of being reinstated by the local DOH. The spheres of responsibility of these various types of workers are represented in Table 3.

Home Office technical and administrative support will be provided by the Child Survival Support Team comprised of Dr. Blasques de Oliveira, Ms Alyssa Wigton, Mr Dennis Cherian, and Ms Tanvi Pandit. The acting Child Survival Coordinator, Dr. Blasques will lead this team. Dr. Blasques is supervised by the Division Director: Joseph Carter. A Technical Advisory Group (TAG) will provide guidance to the CSST; the TAG will draw on the in-house expertise of MCD staff at headquarters in Maine as well as volunteer staff; MCD's president formally authorizing the establishment of this body with Board approval. In addition to in-house staff, Dr. Jane Gardner of the Harvard School of Public Health is also a member of the TAG.

**Table 3: Description of Personnel Associated with the NDCSP**

Name	Title	Supervisor	Duties	Full/Part Time	Salaried by
Farshid Meidany	Project Manager	Senior Project Officer, CS Coordinator	Manage and coordinate all NDCSP implementation activities.	Full-Time	NDCSP
Thuli Ngidi	Training Coordinator	Project Manager	Coordinate clinical training of facility based staff. Devise and implement strategies to improve quality of care, including oversight of the implementation of IMCI and PEP. Training of clinic-based nurses in maternal counseling and HIV/AIDS counseling.	Full-Time	NDCSP
Thoko Radebe	AIDS/PHC Supervisor	Project Manager	Supervise and implement refresher training for HBCVs. Work with CHCs to provide care and support to PLWAs. Assist in Community IMCI training and supervision	Full-Time	NDCSP
Esme Cakata	Home Based Care Trainer	Project Manager, AIDS/PHC Supervisor	Work with CHCs and HBCVs provide care and support to PLWAs. Supervise activities related to HIV and syphilis rapid tests at health facilities Assist Diakonia, TREE, Oakford, etc. to expand or initiate HIV/AIDS programs.	Full-Time	NDCSP
Christopher	Community	Project	Facilitate organization of new CHCs,	Full-Time	NDCSP

<b>Name</b>	<b>Title</b>	<b>Supervisor</b>	<b>Duties</b>	<b>Full/Part Time</b>	<b>Salaried by</b>
Mohatsele	Outreach Organizer	Manager	Provide technical assistance to CHCs on BCC campaigns, Coordinate income-generating activities (with Center for Rural Dev, Natal Univ.), Assist faith based HIV/AIDS activities (Dikonia, etc.).		
Zanele Buthelezi	Social Worker	Project Manager	Work with CHCs to establish and update OVC Registers and monitor condition of children in need. Establish liaison between DOW and CHCs to obtain grants for PLHWA and OVC households. Coordinate activities crèche (Doctors for Life, TREE, Social Welfare, etc.) for creation of model crèches.	Full-Time	NDCSP
Zandile Myeza	Field Administrator/ Bookkeeper	Project Manager	Prepare and submit monthly financial reports and financial requests to HO; oversee collection, input and analysis of facility-based health information system for monitoring NDCSP's progress toward objectives.	Full-time	NDCSP
As Designated by DOH	District Health Management Team (9)	District Health Manager; Director of Health Region F	Plan and supervise an integrated health system for Ndwedwe District; responsible for supervision of health care facilities, CHCs, HBVCs, and other community volunteers.	Part-Time (50%)	DOH
Health Care Providers on DOH Staff	Doctors, Professional Nurses, Enrolled Nurses, etc.at Osindisweni, Montebello and Applesbosch Hospitals; Ndwedwe Community Health Centre and all clinics serving Project area.	KwaMashu Polyclinic, Montebello Hospital, Tongaat Community Health Centre	Provide quality care in Maternal and Child Health, Implement IMCI protocols; Provide AIDS testing and counseling (Hospitals and Community Health Centre) Supervise HBCVs	Full-Time	DOH
To be appointed by DHSMT	Community Health Workers (65)	District Health System Management Team	Visit households in their catchment areas to disseminate health messages and to collect information on household health status for community health information system	Part-Time (50%)	DOH
As designated by each community	Community Health Committee Members (140)	District Health System Management Team	Develop and implement health activities (including BCC campaigns), create and maintain OVC registers, assist families caring for orphans to obtain available government benefits.	Part-Time (10%)	Volunteers
TBAs	Traditional Birth Attendants trained	District Health	Serve as channels for the dissemination to their communities	Part-Time (10%)	Volunteers

Name	Title	Supervisor	Duties	Full/Part Time	Salaried by
	in Phase I; Traditional Healers Association	System Management Team	of NDCSP's child survival, MCH and anti-AIDS messages		
Selected by Community and DHSMT	Home-Based Care Volunteers (150)	District Health System Management Team	Visit homes of PLWA to provide home-based care and counsel family members.	Part-Time (25%)	Volunteers

In addition to the continued employment of several key staff members from Phase I, the NDCSP will employ a Social Worker, an AIDS/PHC Supervisor, and a HBC Trainer during Phase II. At the district and community levels, Phase II will add the CHWs to its BCC and health information task force, contingent upon the continuation of this Project during Phase II (the CHW program was suspended during Phase I but is now being re-instituted). In addition, staff members of Oakford Clinic, TREE, the Diakonia Council of Churches, Sinosizo, and DramAidE will devote time on an as-needed basis to facilitate training sessions, workshops and meetings.

### C. Contingency and Security Plan

MCDI's experience to date in Ndwedwe has been free of any overt security risks. *Potential problems* that could arise include vehicle breakdown in isolated areas, health emergencies, and interpersonal violence, which is a problem throughout South Africa. The project is equipped with an IRIDIUM satellite phone that MCDI (HQ) has supplied to all its CS projects. The phone ensures 24-hour contact with local authorities in KwaZulu Natal, with the US embassy in Pretoria, and MCDI's Washington office. Home office responsibility for overall security planning is assumed by the International Division Director and the President of MCD. Country responsibility is assumed by the CS Coordinator. No significant crises are anticipated in South Africa based on the latest State Department reports. Nonetheless, MCD is embarking on the preparation of a formal security plan for both its International and Domestic Divisions, which will be completed early in 2002 following Interaction Guidelines.

### D. Technical Assistance Plan

MCDI headquarters staff providing technical assistance and backstopping to the field project include the Child Survival Coordinator and the Senior Project Officers. In addition, staff members of Oakford Clinic, TREE, the Diakonia Council of Churches, Sinosizo, the KZN Faith Based AIDS Forum eKhaya Project, the University of Natal Center for Rural Development, the University of Natal Department of Virology, and DramAidE will devote time on an as needed basis to facilitate training sessions, workshops and meetings.

In addition to the substantial technical assistance to be provided to project activities by Provincial DOH officials, and other partners as described above and elsewhere in this document, the NDCSP will contract for some specialized assistance. Consultants who will provide technical assistance to the project during Phase II include Barbara Parker, an Independent Consultant who has worked with the project since its inception. Dr Parker has a PhD in Social Anthropology, University of Michigan and extensive experience designing, managing, and evaluating child survival projects. Her special interests include BCC and maternal and newborn care. Dr Parker will work with the project to finalize the Wealth Ranking and GAPS Analysis tools, and will assist in qualitative formative research.

Dr Edward Green, currently at Harvard University has over 20 years experience working with HIV/AIDS in Africa. He is the Principle Investigator for the Traditional Healers project currently underway in Ndwedwe, and will support the NDCSP in developing follow on activities based on the current research findings.

Dr Christopher Schwabe, a Senior Health Economist, is MCDI's Sustainability Advisor. Dr Schwabe will support the staff in conducting cost effectiveness analyses (i.e., of financial sustainability) of community-based activities such as those carried out by HBCVs.

In addition, the project will explore the feasibility of working with an Organizational Development consultant in support of the project's local partners. Again, this would be with a view towards ensuring the sustainability of the work of our local partners following completion of the NDCSP.

## **E. Information Management**

The following methods will be used to collect data for the basic indicators; manage data and reporting to the HO, local partners and exchange of information between country Projects:

1. District Health Information System (DHIS): Routine monthly data from all primary health care facilities
2. Routine project data: A minimum set of data for calculating priority project indicators will be developed and added to the routine monthly system (DHIS)
3. Supervisory check lists and reports
4. Facility surveys, audits and record reviews: Base-line, mid-term and final
5. Knowledge, practice and coverage surveys: Base-line, mid-term and final
6. Qualitative Surveys: Base-line, mid-term and final
7. Quality assurance assessments: to monitor compliance with project norms and standards
8. Other sources of data: Census data (latest 2001), Annual HIV Antenatal Surveys, Household Surveys (Stats-SA), Health System's Trust annual surveys, individual research and reports (Medical Research Council, National and KwaZulu Natal Departments of Health, universities, etc.).

The following range of potential information systems responsibilities in the project area, field office and the headquarters will be identified and appropriate measure will be implemented:

- Information systems planning: the priorities set for new information systems, for the applications of new information technology (IT), and for other IS-related changes.
- Organizational structures and staffing: the organizational structures used to support the information systems function, and the staffing of that IS function.
- Data management: the way in which data is structured and controlled in the organization.
- Computing and data management architecture: the way in which IT is spread and connected throughout the organization, and the way in which data structures and processing are divided across the IT.
- Information systems development: the who and how by which new information systems are analyzed, designed, constructed and implemented.
- IT acquisition: what information technology is procured and how it is procured.
- Training: what skills are required in training, how that training is to be delivered, and to whom.
- Technical support: the way in which IT is installed, maintained, repaired and otherwise supported in its operation.

The MCDI headquarters will inform/forward appropriate and updated information from relevant and reliable sources, e.g.; CORE working group, CSTS Bookmarks, etc., to the field office via electronic mail, courier and postal services. This information will be filtered and transmitted to our local partners, like District and Provincial program managers, HIV/AIDS Regional Coordinator and other partners. Some appropriate and useful information for the community use will be translated into Zulu and will be disseminated through different media; like posters, pamphlets, health facility health education sessions, community and religious meetings, and the community radios.

Presently the e-mail system in the field office is based on a dial up internet connection system and there is a local network system established in the office. Feasibility of a LAN connection by the second year of the project will be studied. One of the objectives of this plan is to create a website for NDCSP. We suggest the creation of a combined DHSMT and MCDI website by the end of the second year of the project.

## **F. Financial Management**

The financial management of the project funds will be shared responsibility of the field team and home office staff. In the field, the Administrator/Financial Manager will have responsibility for implementing MCDI management protocols for field accounts. This protocol consists of a manual that outlines standard procedures for tracking all field expenditures and income fund transfers authorized by the Project Manager and the Director of the Division; accompanying the manual is an Excel-based menu of spreadsheets that supports the standardized data entry and reporting. All Project expenditures will be entered into this database, and aggregated monthly. Monthly financial reports summarizing the results will be submitted by the field-based NDCSP Administrative Assistant to the MCDI Administrator in the Washington DC Headquarters. Field office expenditures reports are submitted on a monthly basis to the CSST in Washington where they are reviewed and forwarded to the office of the CFO in Augusta, Maine. Field expenditures are tracked using a coded chart of accounts that corresponds to project grant line items.

Project budgeting, monitoring and reporting will be the joint responsibility of the Project Manager and Administrator in the field, and the Senior Project Officer and Administrator in the Home Office.

Each year, the Project Manager submits a detailed budget for the activities that are planned, which includes specific budgetary needs for line items such as training, personnel, supplies, equipment, etc. These budgets are reviewed by and discussed with the Home Office. In addition, monthly progress reports detailing activities provide a mechanism for ongoing monitoring and tracking of Project activities. These are compiled into quarterly reports, and subsequently into Annual reports, which are submitted to USAID.

## **G. Logistical Management**

The Final Evaluation from Phase I stated that the logistical management of the NDSCP was excellent throughout the project although there was evidence of slippage at the very end. There were no vehicle accidents and all vehicles procured were serviceable at the time of the evaluation. The evaluator commented that this was quite a remarkable achievement, given that much of the accumulated mileage occurred on un-surfaced roads, which are frequently impassable in the rainy season. Procurement and usage of other commodities was also very efficient and wastage was minimal (e.g. two printers discarded).

In addition, during Phase I some wastage occurred in one batch of the rapid HIV test materials due to reagent evaporation. This batch apparently was procured from India and the wastage could not be directly attributed to the project management. At the time of the evaluation these reagents were out of stock due to the failure to place an order late in 2001, with consequent service disruption. This delay was occasioned by the precipitous departure of the Project Manager and a failure to systematize the procurement process, which resulted in none of the remaining project staff being aware of the procedures for procurement.

The evaluator concluded that the project's current logistics systems are very well established and sufficiently strong to support the expanded Project activities anticipated during Phase 2. This is encouraging given that the project's procurement activities will largely be similar to those that took place during Phase I (e.g., procurement of rapid tests) although new activities relating to the prevention of MTCT will require the NDCSP to procure drugs such as Nevirapine. Following discussions with the DOH, MCDI will respond to a request to apply for these supplies from a US-based group that provides the drug at no charge.

At this venture, there are no foreseeable "weak links" in the project's logistics system. However, if weak links do arise, the Project Manager will coordinate with the Home Office Child Survival Support Team as well as the local DOH partners to identify solutions to the problems.

## **H. Monitoring and Evaluation**

### **Goals and Objectives**

The goals of the NDCSP are unchanged in Phase II: **To reduce morbidity and mortality among children under the age of 60 months, and to improve the health status of women of**

**reproductive age (WRA).** To reach this goal, the project will focus on several key interventions: HIV/AIDS/STIs (LOE 30%), Control of Diarrheal Diseases (LOE 20%), Immunizations (LOE 20%), Pneumonia Case Management (LOE 15%) and Maternal/Newborn Care (LOE 15%).

The Phase II results-based objectives for the principal interventions are as follows:

**HIV/AIDS/STIs Objectives, by end of project (EOP):** 1) Sixty-five percent of mothers will be aware of at least three symptoms of STIs other than HIV/AIDS in females; 2) Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%; 3) Ninety percent of mothers will be able to recognize at least two known ways which a mother can transmit HIV/AIDS to her child; 4) Ninety percent of women will be willing to allow children under their care to play with an HIV-positive child; 5) One hundred percent of the appropriate health facilities in the project area provide HIV/AIDS/STIs prenatal screening and counseling; 6) Seventy-five percent of households caring for OVCs will be aware of and know how to access DSW grants and services; 7) Eighty-five percent of high school students in which School Health Clubs (SHCs) are active have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention; 8) Sixty percent of high school students with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use); 9) Ninety percent of high school students in which SHCs are active have adequate knowledge of the care of family members with AIDS; 10) Fifty percent of facilities provide Nevirapine to AIDS-infected mothers according to protocols.

**Control of Diarrheal Diseases Objectives by EOP:** 1) Ninety percent of mothers and non-maternal caregivers will provide oral rehydration solution (ORS) to the child under their care during diarrheal episodes; 2) Fifty percent of mothers and caregivers will report that they wash their hands before feeding the child under their care; 3) Eighty-five percent of mothers and caregivers will give the same of or more liquids than usual during diarrhea episodes.

**Pneumonia Case Management Objectives, by EOP:** 1) Twenty-five percent of mothers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of symptoms; 2) IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of clinics in the Project area.

**Immunization Objectives, by EOP:** 1) Seventy percent of children aged 12-23 months are fully immunized per RTH card; 2) Eighty percent of children aged 12-23 months will have received a measles vaccination per RTH card.

**Maternal/Newborn Care Objectives, by EOP:** 1) At least 60% of mothers will be aware of three or more of the danger signs in newborns that require immediate treatment; 2) Forty percent of CHCs will have established a community-based health fund to cover health needs designated as priorities by the community such as transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc; 3) During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter; 4) Eighty percent of midwives in Project area health facilities will be trained in the PEP modules.

An overview of the Cost-Extension Project's objectives, indicators, measurement methods, and major planned activities is included in Table 4 below.

**Table 4: Extended Program Summary Matrix**

Objectives	Indicators	Measurement Methods	Major Planned Activities
<b>HIV/AIDS/STIs</b>			
<b>Objective 1:</b> 65% of mothers will be aware of at least three symptoms of STIs other than HIV/AIDS in females.	Percentage of mothers who can name three or more symptoms of STIs in females.	KPC Survey	BCC activities in community venues and gatherings; DramAidE organization of School Health Promotion Clubs, and Health Facility IEC.
<b>Objective 2:</b> Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%.	Percentage of women who report use of a condom during the last act of intercourse.	KPC Survey	Support groups organized by faith-based organizations; community BCC activities & counseling carried out by CHCs, CHWs, HBCVs, TBA
<b>Objective 3:</b> 90% of mothers will be able to recognize at least two known ways in which a mother can transmit HIV/AIDS to her child	Percentage of mothers who are able to recognize at-least two known ways of mother to child transmission of HIV/AIDS	KPC survey Results of focus group research and semi-structured interviews	community BCC activities carried out by CHCs, CHWs, HBCVs, TBAs facility IEC sessions
<b>Objective 4:</b> 90% of women will be willing to allow children under their care to play with an HIV-positive child	Percentage of mothers and caregivers who state they are willing for a child under their care to play with an HIV-positive child.	KPC Survey Results of focus group research and semi-structured interviews.	De-stigmatization education through church leaders, Amakosi and traditional healers. CHCs, CHWs, HBCVs, TBAs facility IEC sessions
<b>Objective 5:</b> 100% of appropriate health facilities will provide HIV/AIDS/ STIs prenatal screening and counseling.	Percentage of clinics and hospitals providing HIV/AIDS/ STIs screening and counseling.	Supervisory checklists. Facility assessment exercises.	Training of clinic personnel in counseling skills Rapid testing program with PATH technologies
<b>Objective 6:</b> 75% of households caring for OVCs will be aware of and know how to access DSW grants and services.	Percentage of caregivers caring for OVCs who have established contact with DSW.	Community Health Committee OVC Registers; Quarterly reports by NDCSP Community Organizers; and DSW Registers	Community Organizers' work with and training of CHCs; liaison with DSW.
<b>Objective 7:</b> 85% of high school students in schools with active School Health Clubs (SHCs) have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention	Percentage of school students in schools with active SHC can name at-least two strategies of HIV/AIDS prevention	Focus group discussions Review of school health club activities	DramAidE organization of School Health Promotion Clubs; education of school students by Dram Aide using drama as a media
<b>Objective 8:</b> 60% of high school students in schools with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence,	Percentage of school students in schools with active SHC adopting at-least one of the three methods of HIV/AIDS prevention	Focus group discussion	Education of school students by Dram Aide using drama as a media

<b>Objectives</b>	<b>Indicators</b>	<b>Measurement Methods</b>	<b>Major Planned Activities</b>
being faithful, condom use)			
<b>Objective 9:</b> 90% of high school students in schools with active SHCs have adequate knowledge of the care of family members with AIDS	Percentage of high schools students in schools with active SHCs that can describe important caretaking techniques for the care of family members with AIDS	Observations Focus group discussions	Dram AidE education of school students using drama as a media Support HCBVs care at the community level
<b>Objective 10:</b> 50% of facilities provide Nevirapine to HIV/AIDS-infected mothers according to protocols	Percentage of facilities providing nevirapine according to protocols for mothers infected with HIV/AIDS	Facility records review	Procure and supply nevirapine for DOH Train facility nurses in nevirapine protocols and treatment
<b>CONTROL OF DIARRHEAL DISEASES</b>			
<b>Objective 1:</b> 90% of mothers and non-maternal caregivers will provide oral rehydration therapy to the child under their care during diarrheal episodes.	Percent of mothers and non-maternal caregivers who report they gave ORS during their child's last episode of diarrhea	KPC Survey	CHC, CHW, and HBCVs BCC activities & counseling at the community level and by nurses in clinic ORT corners
<b>Objective 2:</b> 50% of mothers and caregivers will report that they wash their hands before feeding the child under their care.	Percent of mothers and caregivers who report hand-washing before feeding children	KPC Survey	CHC, CHW, HBCVs BCC activities & maternal counseling at the community level and by nurses in clinic ORT corners
<b>Objective 3:</b> 85% of mothers and caregivers will give the same amount of or more liquids than usual during diarrheal episodes.	Percent of mothers and caregivers who report that they gave the same or more than usual liquids during the child's last diarrheal episode.	KPC Survey	CHC, CHW, HBCVs BCC activities & counseling at the community level and by nurses in clinic ORT corners
<b>PNEUMONIA CASE MANAGEMENT</b>			
<b>Objective 1:</b> 25% of mothers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of symptoms.	Percent of KPC survey mothers who report they sought medical treatment of their child with cough and rapid or difficult breathing by the end of the day after the onset of symptoms.	KPC Survey; Confirmatory clinic records	BCC campaigns & maternal counseling by CHCs, CHWs, HBCVs crèche operators and by clinic staff as part of IMCI implementation.
<b>Objective 2:</b> IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the program clinics	Percent of nurses treating children who correctly diagnose and treat children with cough and difficult breathing during supervisory visits.	Inter-clinic peer observation and review reports; supervisory checklists	IMCI training, follow-up supervisory system instituted for all facilities
<b>IMMUNIZATION</b>			
<b>Objective 1:</b> 65% of children aged 12-23 months will be fully immunized per RTH card	Percent of KPC survey children 12-23 months of age whose RTH Cards indicate that they are fully immunized.	RTH Cards KPC Survey Monitoring of quality of immunization services using DOH tools Community based tools to track eligible	IMCI supervisory training; IMCI supervisory visits ;target missed opportunities; continued support to polio and measles campaigns

<b>Objectives</b>	<b>Indicators</b>	<b>Measurement Methods</b>	<b>Major Planned Activities</b>
<b>Objective 2:</b> 80% of children aged 12-23 months will have received a measles vaccination per RTH card	Percent of KPC survey children 12-23 months of age whose RTH Cards indicate that they are immunized for measles.	RTH Cards KPC Survey Community based tools to track eligible	IMCI supervisory training; IMCI supervisory visits target missed opportunities; continued support to measles campaigns
<b>MATERNAL AND NEONATAL CARE</b>			
<b>Objective 1:</b> At least 60% of mother will be aware of three or more of the danger signs in newborns that require immediate treatment.	Percentage of women who can name one or more of the danger signs in newborns.	KPC Survey	BCC activities carried out by CHCs; maternal counseling by HBCVs, CHWs, crèche operators and program-trained TBAs, and by health workers in antenatal care sessions.
<b>Objective 2:</b> 40% of CHCs will have established a community-based health fund to cover health needs designated as priorities by the community such as transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc	Number of Ambulance Emergency Funds established with bank accounts in CHC catchment areas.	Monthly reports of Community Organizers and CHC's Reports	Community organizers work with and train CHCs.
<b>Objective 3:</b> During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter	Percent of mothers who report they made one antenatal visit during their first trimester and that they made at least 4 antenatal visits in all.	KPC Report Review of maternal health cards	BCC activities through CHCs, CHWs, church leaders, TBAs, traditional healers.
<b>Objective 4:</b> 80% of midwives in program area health facilities will be trained in the PEP modules.	Percentage of midwives in program area health facilities who are trained in the PEP modules.	Training logs.	PEP training in all health facilities serving the program area.

## Monitoring and Evaluation Plan

**Program Approach to Monitoring and Evaluation:** The NDCSP will utilize several different techniques to monitor and evaluate its activities. MCDI will use PLA methodologies at the community level to understand community behavioral practices and health care seeking behaviors that impact decision-making at the grassroots level. In addition, the 30 cluster sampling technique has been used to carry out the project's KPC surveys. The possibility of utilizing LQAS as a routine monitoring tool will be reviewed during Phase II. Quality assurance mechanisms are utilized to monitor the various technical activities underway. In addition, cost-effectiveness studies will provide a unique perspective on the sustainability of key activities such as those carried out by HBCVs in the community.

The project is also using the EPI Info package to analyze information that emerges from from the orphan register, the same package will also be used to analyze HBCVs field data.

In an effort to monitor and evaluate its own institutional capacity, MCDI's programs at all levels (field, Home Office, Domestic Division, and Board of Director) participated in an Institutional Strengthening Assessment during March 2002. The findings from the ISA have been reviewed, and short term strategies to address the specific capacity areas assessed have been identified and shared with the field. For example, MCDI is currently revising its financial management system based on feedback received during the ISA to be more responsive to the field teams. In addition, the findings from the ISA will feed into MCDI's strategic planning process and will be used in strengthening the organizational capacity.

**Monitoring and Evaluation Plan:** The population denominator for the NDCSP's data collection activities will be based on census data which is collected once in 5 years. The current census was done in 2001, and the report has yet to be released.

The NDCSP will utilize several different sources of data during Phase II of the project. First, the project will use the DHIS data and regular notification data for routine monitoring, especially for measles, AFP, and neonatal tetanus from clinics and hospitals. The DHIS measures minimum indicators of primary health care services per facility, as well as for the district and province (for example, the number of children vaccinated each month). The routine notification data will estimate information on epidemics such as measles, cholera, neonatal tetanus, and AFP, etc.

The project will also use the following IMCI monitoring tools: (a) health facility support checklist, (b) checklist for case management, and (c) caretaker interview form to monitor and supervise the IMCI practices at the clinic level. In addition, the cold chain monitoring tools and temperature checklist developed by the DOH will be used to measure the quality of immunization services at the clinic level.

In addition, the project's Training Coordinator will continue to utilize the data collection tools for the clinic level developed by the NDCSP during Phase I to measure outpatient cases at clinics for various maternal and childhood illnesses, a form to track referral of cases to hospital, and a form to track deliveries, births, and deaths (see Annex 11).

Although information available at the community level is not comprehensive, TBAs do collect information on maternal and newborn care (Annex 12), and an orphan register (see Annex 13) exists to enable the community to track the care of orphan children. The project will develop a more comprehensive community based monitoring system that will help track epidemiological and demographic and social welfare data. The tool will be developed based on models already being reviewed by the project, i.e., the HBCVs monitoring report and CHW registers. This tool will be pre-tested and used by trained community workers. The tool will also help the project and DOH to gather complete information at the community level, for example, on the activities carried out by HBCVs.

The possible overlapping of data (i.e., "double counting") can be caused when mothers/families go to the clinics for services which are not recorded in the community-based records. This problem will be addressed by integrating the information gathered at the community level with the facility based registers and ensuring that data from the communities are shared with the facilities and are used in providing services.

**Monitoring Tools:** The NDCSP will use several different tools to monitor and evaluate its work. Baseline and final surveys will be conducted using the KPC 2000+ survey instrument. During

Phase II, the project will again conduct a KPC as part of the final evaluation. Community based monitoring tools will be used to collect data at the community level and assist in decision making at the local level by the CHCs and Amakosi. These tools will be developed in partnership with the DOH and they will be field tested at the community level by the project's Training Coordinator, Community Outreach Organizer, and Social Worker in collaboration with the community-based health workers and the DOH. Once these tools are tested they will be modified and developed by the project and used by the CHWs, TBAs, and HBCVs. Findings and data will be shared with the CHCs and Amakosi to enable them to make decisions about the health priorities and problems in their respective communities.

The following tools are currently being successfully implemented in the district:

- a) An orphan register to collect information at the community level and to help ensure that all OVC have access to services.
- b) A patient profile (community based monitoring tool) checklist to measure the home based care services of HBCVS
- c) The IMCI supervisory checklists of (a) facility supports, (b) case management of a sick child and, (c) caregiver interview forms to help maintain quality IMCI management practices at the clinic level
- d) A form to record outpatient cases to estimate the epidemiological data at outpatient clinics and referral form to estimate clients referred to hospitals.
- e) A TBA Birth Form, Postnatal Record Form, and Referral Form for sick women and children are used by TBAs at the community level on a regular basis.
- f) CHW registers will be documented.

MCDI has also designed a Quarterly Reporting Instrument (QRI) used by all of its CS projects? that is, a matrix that lists project objectives by intervention, major inputs and outputs. It includes columns for activities conducted during the reporting period and progress to date. To facilitate tracking of progress toward achievement of objectives, the matrix also contains indicators such as ANC visits and TT vaccinations, and comparison of disease incidence for current and previous periods for the child survival intervention areas. MCDI will continue to use the QRI to monitor activities during Phase II, and updated QRIs accompany all quarterly reports from the field to the home office.

The NDCSP staff will review all tools currently in use by the project to ensure that tools utilized are appropriate and necessary.

**Data Collection Processes:** Monthly monitoring of progress is carried out primarily through the HIS established during Phase I by the Project in collaboration with the DHSMT. A small grant was received from government for the purpose of developing and implementing a new HIS system featuring a record-keeping system and clinic register to facilitate tracking of the prevalence of reportable diseases diagnosed by health facility staff. The forms are collected monthly with logistical support from MCDI, and information on pneumonia, watery diarrhea, dysentery, measles, tetanus, acute flacid paralysis, and marasmus/kwashiorkor and perinatal problems are entered in the NDCSP data base. The Project aggregates these figures quarterly for inclusion in its quarterly reports and yearly for inclusion in annual reports/evaluations. In

addition, the NDCSP has donated a computer to the DHSMT that allows the Interim District Health Manager to maintain this information in a database.

All eligible women, children and newborns will be tracked using the community based monitoring tool that the project will develop in collaboration with the DOH. It will be the role of the community-based workers to ensure that all who are eligible are tracked and benefit from the project interventions.

CHWs, HBCVs, and TBAs will collect data at the community level and the current ratio of data collectors to households is 1:100. The project is working with the DOH in defining the geographic and household distribution for each worker. CHWs are paid by the DOH and work 8 hours a day for 4 days a week. HBCVs are volunteers available for work with no specific hours of duty allocated. The project's Training Coordinator, HBCV Coordinators, and Community Outreach Organizer will supervise the regular data collection process. Each project staff member will be assigned to a specific number of workers (to be determined in collaboration with the DOH) and onsite field supervision will ensure quality of data.

The frequency of data collection varies depending by the tools being used. Census data will be collected once during the project period, data from community-based tools are regularly (i.e., bi-weekly) collected, and data from health facilities (i.e., clinics and hospitals) will be collected monthly.

The data collected will be analyzed by the project and DOH staff with active involvement of data collectors in every stage of the process. Hand tabulations of the data is done on the field, and the project will use the project's own health information system to analyze data collected. The results will be shared with the DOH and local stakeholders through workshops and regular meetings at the local level. At the community level, epidemiological and coverage level data will be shared with mothers/families as part of the project's BC education in order to empower them. Data collected will therefore be used to inform project activities on the ground. In addition, the data will be shared with the DOH on a regular basis, which will help in assessing the coverage level and to plan interventions according to the needs of the community.

**Data Uses:** The data analyzed by the project will be used for advocacy purposes. During the first Phase of the project the following were accomplished using NDCSP data:

- (a) Following the KPC 2000 survey, an orphan register was developed which is being used at the community level to enable community based structures such as CHCs to identify and respond to the needs of vulnerable children in their areas
- (b) Advocacy with the Department of Home Affairs to make birth and death certificates available for families
- (c) KPC data also resulted in the Project's approach focusing on empowering the CHC and families in accessing the DSW grants and establishing a relationship with the department.

The HIS system utilized during Phase I has proved very useful in tracking conditions seen by health facilities and pinpointing changes in child health status that these statistics indicate. However, not all illnesses are seen in the clinics or at the two hospitals serving Ndwedwe Sub-

District. Many are simply treated at home, while some sick children are taken (against referral system policy) to urban hospitals in Durban and KwaMashu. The Project's data management system will use the current HIS system. This will help to analyze routine epidemiological, demographic and coverage data collected using the community based monitoring tool.

In addition, the DOH has asked the project manager, a physician and epidemiologist with experience working with DOH health information systems, to help them produce quarterly and monthly provincial reports of epidemiological data (for example, cholera, HIV/AIDS, and TB, etc.). Through this partnership, data obtained via the NDCSP's community monitoring efforts will be incorporated into these reports. This will provide a unique opportunity to bring visibility throughout the country to both the project and its development of community based monitoring systems.

***Impact of Program Monitoring and Evaluation on Quality of Care:*** The performance of health workers will be improved by reinstating in place a regular supervisory system at the clinics. IMCI supervisory trainings will be conducted with the DOH. The IMCI checklists: (a) checklist of facility supports, (b) checklist for case management practices, (c) care taker interview forms will be used during routine supervisory visits at clinics to ensure that case management practices are maintained and health systems necessary to maintain services are in place. Details of the IMCI protocols to be followed are included in Annex VIII. In addition, cold chain monitoring will be conducted on a regular basis to ensure quality of cold chain and immunization services. These services will be strengthened with the use of following checklists (a) cold chain and immunization operation management, (b) surveillance and health promotion, (c) clinical practices, management, training and integrated child health, (d) exit interview to assess the workers quality of care, (e) temperature monitoring chart for cold chain maintenance.

Facility staff will also be trained to provide quality-counseling services to ensure effective client-provider interaction. Supervision will be a critical activity following skills based training of both facility based and community based providers. In addition, the project team will use a checklist for pharmaceutical services on monthly clinic assessment visit in partnership with DOH for effective drugs management.

An orphan register and community based monitoring tool is being used by the project to track services for orphans and HIV clients. CHC members and HBCVs are assigned by rotation to visit these children monthly and carry out an informal assessment of their health status and well being. The results will be entered in the OVC Register. The CHCs will review their registers during monthly meetings and determine what action, if any, should be taken to support those whose condition is deteriorating or unsatisfactory. HBCVs will be asked to report, during monthly supervision meetings, on the status of the patients under their care, and on the number of family caregivers they have trained in the basic principals of home-based care.

In addition the project is using the following DOH guidelines:

- (a) KZN IMCI guidelines, February 2001
- (b) Guidelines for maternity care and policy and management guidelines for common causes of maternal deaths
- (c) HIV policy guidelines on feeding of infants of HIV positive mothers, management of occupational exposure to HIV, Tuberculosis and HIV/AIDS, syndromic case management

of STDs (in collaboration with protocols for HIV/AIDS and syphilis rapid testing), prevention of MTCT, rapid testing and testing for HIV

These guidelines help to ensure that the protocols are followed and the supervisory tools and training manuals help to ensure that the staff receive state of the art knowledge and maintain quality of services.

The NDCSP plans to undertake a series of Institutional Strengths Analyses in collaboration with its partners during Phase II. These exercises will involve an initial assessment of the strengths and weaknesses of these organizations through use of an assessment instrument developed specifically for South African organizations with support of USAID/RSA. The purpose of this activity will be to monitor the NDCSP's success in improving the capabilities of these partners during the life of the Project and assess the M&E skills of these partners. In the final year of the NDCSP, the assessment exercises will be repeated and positive changes in the capacities of the participating organizations will be documented.

***Strengthening the M & E Skills of Project Partners:*** At the field level, the NDCSP widely shares Project information and lessons learned with the Council of the Amakosi (traditional authorities), the DHSMT and CHCs. In Phase II, this dissemination of information will continue and will be expanded to include the Iembe Regional Council, the Ndwedwe AIDS Task Force and all partner organizations. Quarterly Stakeholders' Meetings are planned for Phase II, in which MCDI will share results of the HIS and community data collection systems (as well as all special studies conducted by the Project). Partners will be encouraged to report their own results, experiences and problems they have encountered in the preceding quarter.

Internationally, Project results during Phase I have been shared through MCDI presentations at international consortia such as the Global Health Council and CORE Group meetings. In Phase II, MCDI will make yearly presentations to one of these bodies to disseminate results and lessons learned.

***Sustainability of the M & E System:*** In order to ensure the sustainability of M & E Systems utilized by the project, partner NGOs, community workers, and DOH staff have active participation and input into the design and utilization of tools that are used. For example, the high emphasis on training facility-based staff in supervisory skills will ensure that the routine supervisory systems remain in place after the Project phases out. In addition, the orphan register that was developed during Phase I was designed and pre-tested by the members of Community Health Committees. Local partners (both DOH and HBCVs, for example) have played a key role in the implementation of our PLA and KPC exercises. The active involvement of community partners such as CHC, CHWs, HBCVS, TBAs in data collection and decision making will continue throughout Phase II in order to support the continuation of these activities after the project phases out. In addition, the CHCs will be strengthened to function as a monitoring body at the community level.

***Studies, Assessments, Operations Research:*** One component of the project's involvement in piloting IMCI in Ndwedwe is aimed at identifying the constraints health workers face in attempting to re-organize services for more effective integration of child health services, and to suggest measures to attack these constraints. Therefore, a health facilities assessment is being carried out in the final year of Phase I that will identify these constraints and lead to a plan for addressing them in Phase II. As described under the **Organizational Development** section,

improvements in local partners' capacities will be documented through Institutional Strengths Analyses. The NDCSP has already gathered baseline data on the organizational capacity of its local NGO partner organizations (TREE, DramAidE) using USAID South Africa's guide. During Phase II, the NDCSP will administer OCAs for its local NGO partners on an annual basis so that progress toward building the capacity of local NGOs can be measured.

In addition, the planned study to monitor the cost-effectiveness of HBC activities in the District will inform the community and DOH so that they can make informed choices about continuation of these activities.

## **Evaluation Plan**

The NDCSP's planned evaluation system is as follows:

1. A baseline KPC survey was carried out at the beginning of the Phase II Period in 2001. The information gathered from this survey is being supplemented by information gathered during the recent final evaluation to assess the effectiveness of Phase I activities.
2. A mid-term evaluation is planned for the summer (December 2003 - February 2004) which will be led by an external evaluator and will include participation of Project staff, local partners including NGOs, CHWs, TBAs, HBCVs, and CHCs, and representatives of the DOH and DHSMT. This time of year would be most optimal for conducting the evaluation as travel is generally easier during this season (i.e., not the rainy season).
3. A Final KPC will be conducted in Year 4 of the project and will inform the Final Evaluation. In addition, the project will explore the feasibility of conducting annual assessments using LQAS methods.

In addition, ongoing monitoring of activities in partnership with both facility-based and community-based providers will enable them to track the effectiveness of their own activities and child health conditions in their communities. These are described above. The provincial DOH has asked MCDI to develop a model of a Community-Based Information System (CBIS) which will support this monitoring plan. A hand-held data collection format will be developed in collaboration with the Directorate of Maternal and Child Health/Women's Health (MCH/WH) and a simple reporting format will be developed to provide summary information that can be distributed to the government and the community. If it proves to be feasible and cost-effective, the MCH/WH will scale up the CBIS to other districts and, eventually, the province.

## **I. Budget**

There have been no quantitative changes to MCDI's project budget since the original application was accepted. However, there has been a change to the in-kind budget (the percentage of MCDI's contribution to the in-kind project has decreased from 34% to 28%). As a result, MCDI is re-submitting the in-kind budget, which is included as Annex XIV.

## **J. Work plan**

A detailed work plan for the 4 years of the Phase II project is included as Annex XV. This work plan includes major activities, annual benchmarks, as well as activities/interventions that will be phased-in or phased-out during Phase II.

This work plan has been developed with full consultation of the project's partners in the field. The work plan will be utilized continually to lead project activities, and will be used as a mechanism to review progress following each project quarter as well as at the end of each year. Slight modifications to the plan, when necessary, will be shared with Home Office staff and project partners.

## **Section III: Detailed Plans by Intervention**

### **A. HIV/AIDS/STIs**

Since the late 1990s it has become clear that the Republic of South Africa is in the grip of an HIV epidemic and is among the world's most severely affected nations. The problem is particularly acute in the KwaZulu Natal province, where an estimated 34% of pregnant women are HIV positive. One in 3 of these women will infect their children either during pregnancy, during labor and delivery or through breastfeeding. As a result, during Phase I, project staff became concerned about the rapid rise of HIV infection in Ndwedwe District. In order to incorporate activities aimed at ameliorating the problem, MCDI developed a sub-project proposal and submitted it to the USAID country mission in Pretoria. This sub-project proposal was accepted in 2000, and provided supplemental funding to enable the project to expand the limited HIV control activities included within the original child survival project so as to more adequately address the extent of the epidemic.

The multi-faceted intervention focused upon three types of initiatives: 1) preventing new cases through community- and school-based prevention programs, 2) strengthening the capacity of families and communities to meet the needs of orphans and children affected by AIDS, and 3) providing support to and supervision of home-based care for people living with AIDS (PLWA).

During Phase II of the NDCSP, in response to the continued escalation of HIV/AIDS affected persons in the project area, the level of effort assigned to the HIV/AIDS/STI intervention will be increased to 30%. Specific results-based objectives relating to HIV/AIDS/STIs include the following: 1) Sixty-five percent of mothers will be aware of at least three symptoms of STIs other than HIV/AIDS in females; 2) Mothers reporting use of condoms on last act of intercourse will increase from 30% to 50%; 3) Ninety percent of mothers will be able to recognize at least two known ways in which a mother can transmit HIV/AIDS to her child; 4) Ninety percent of women will be willing to allow children under their care to play with an HIV-positive child; 5) One hundred percent of the appropriate health facilities in the project area will provide HIV/AIDS/STIs prenatal screening and counseling; 6) Seventy-five percent of households caring for orphaned and vulnerable children (OVCs) will be aware of and know how to access Department of Social Welfare (DSW) grants and services; 7) Eighty-five percent of high school students in which School Health Clubs (SHCs) are active have adequate knowledge of HIV/AIDS prevention as demonstrated in their ability to name at least two strategies of prevention; 8) Sixty percent of high school students with active SHCs report adoption of one of three strategies of HIV/AIDS prevention (abstinence, being faithful, condom use); 9) Ninety percent of high school students in which SHCs are active have adequate knowledge of the care of family members with AIDS; 10) Fifty percent of facilities provide Nevirapine to AIDS-infected mothers according to protocols.

#### **1. Current Status/Coverage/Prevalence**

South Africa is among the worst HIV/AIDS-affected countries in the world. The nation is home to half of all HIV-positive people in the nine southern African countries hardest hit by the pandemic, and recently surpassed India as the nation with the greatest number of people living

with HIV/AIDS.<sup>8</sup> It is categorized by USAID as one of its “Intensive” focal countries to which resources can be channeled to reduce prevalence and transmission and increase support to people living with and affected by HIV/AIDS.

The KwaZulu Natal province has the highest HIV prevalence rate and the highest number of HIV positive people among all nine provinces in South Africa. According to the Annual Antenatal HIV Survey, 33.5% of all first visit pregnant women in KwaZulu Natal in 2001 were HIV positive.<sup>9</sup>

According to the National Primary Health Care Facilities Survey 2000, 40% of the fixed clinics in KwaZulu Natal had HIV testing (which is 8% lower than in 1998), 50% of the satellite clinics had testing facilities, and only 14.4% of the mobile clinics had testing facilities available. Almost 63% of the fixed clinics had syphilis testing, while 25% of the satellite clinics and 64.3% of the mobile clinics had syphilis testing available. In comparison, the availability of care for sexually transmitted infections (STIs) was high at 95%.

“Best practices” strategies of care for HIV/AIDS infected persons have expanded beyond the confines of clinics. Home based care services provided by home based care volunteers (HBCVs) at the community level can have a significant impact on access to care, particularly in an area like Ndwedwe where the estimated travel time required and cost incurred to reach a clinic between ½ and 2 hours and R10-15 (\$1), respectively. As many families and caregivers do not even have access to this meager amount of money, it can have a significant effect on access to care.

Voluntary Counseling and Testing (VCT) services are available at Ndwedwe’s clinics. The clinics serve as points where blood is drawn and sent to district hospitals for testing services. Pregnant women are screened for STIs and HIV voluntarily.

## **2. Causes, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior**

A qualitative survey done between March and May 2000 led by MCDI’s consultant anthropologist included 12 focus group discussions and 22 semi-structured interviews with young women (under age 25), young men (under age 25), and older men and older women (age 25 or over) in one rural, one deep rural, and one peri-urban area of Ndwedwe District. The purpose of the qualitative component was to assess participants’ understanding of HIV/AIDS in the community, including attitudes towards people living with AIDS and AIDS-affected children, and to identify existing and traditional community institutions that might become the basis of a community-based home care program. The team also visited local religious leaders of several locally popular faiths, in order to solicit these leaders’ assessments of their parishioners’ attitudes towards persons living with AIDS (PLWA), and their potential willingness to offer assistance to those in need of care and support. The findings of these discussions and interviews led to the identification of a number of factors that contribute to the spread of HIV, and to a set of conclusions that are pertinent to the objectives of the NDCSP. They are:

1. *HIV/AIDS awareness is high, but misconceptions are common:* Although a few continue to deny the reality of the HIV/AIDS phenomenon, virtually all Ndwedwe residents appear to be

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<sup>8</sup> USAID. *Global Health HIV/AIDS in South Africa*.

<sup>9</sup> *National Department of Health*.

aware of the existence of HIV/AIDS, and to know that the infection is sexually transmitted. Beyond this, misconceptions about the disease are widespread. Ndwedwe community members hold conflicting (and compartmentalized) beliefs to the effect that HIV is always acquired through sexual “misconduct” and, simultaneously, that there is danger of HIV contamination through casual means such as sitting in a chair used previously by a PLWA. In addition, *informants believe that an infant is invariably HIV positive if he/she has been born to a woman who is HIV positive*; and such a child is believed to present a danger to any potential foster or adoptive family.

2. *Condom awareness is also high, and free condoms are easily available, but condom use is extremely rare*: Because requests for condom use are assumed to imply infidelity or mistrust, both partners in sexual relationships are reluctant to press for condom usage. There is little or no awareness of the role of previous sexual history in present HIV status.
3. *Economic dependency of girls and women inhibits condom use*: Women are reluctant to make any demands upon men whom they look to for financial support, and due to the often fragile character of marital and other intimate relationships, they feel themselves to be in harsh competition with other women for breadwinners. They are therefore unwilling to demand condom use for their own protection, and they are often powerless to demand fidelity.
4. *Exploitation of school girls is a problem in Ndwedwe District*: Younger informants revealed that it is common for older men (taxi and bus drivers, local businessmen, school teachers, etc.) to sexually exploit girls in the 14-16 age group by offering them money, favors, or “love.” These girls are vulnerable by virtue of poverty, lack of accurate sex information, and absentee fathers. They could constitute a channel through which HIV enters the high school population, since most have boyfriends of their own age, in addition to the “sugar daddy.”
5. *The community’s social, financial and information resources for the care and support of PLWA or orphans are thin*: Because the average Ndwedwe household is impoverished, there are few or no resources available for the care and feeding of extra persons. In addition, there is a misplaced fear of contamination with HIV from PLWA or AIDS orphans. There is little understanding of the difference between the need for appropriate universal precautions when giving home care to PLWA, and the perceived “danger” of casual transmission through common eating utensils, etc. In other words, accurate information about HIV transmission is one of the resources that is in short supply.
6. *Nevertheless, there are potential resources in the community*: Local church leaders, particularly those affiliated with the major international churches, have expressed interest in working with other organizations to assist PLWA and children affected by AIDS, at least among their own congregations. The newly formed Community Health Committees (CHCs) have all identified HIV/AIDS as one of the health problems they are most interested in tackling. A few individual informants also said they, or a neighbor, might be willing to care for an unrelated orphan if minimal financial resources were made available. Currently, the Department of Welfare does make a grant available to those caring for orphans, and informants indicated that this grant would be adequate to cover the extra costs involved. In addition, Traditional healers provide another potential source of positive messages about HIV/AIDS in the community, and many traditional healers have expressed an interest in

working with the NDCSP and DOH in improving their capacity to prevent HIV/AIDS and to provide care to PLWA and AIDS orphans.

Discussions with project staff indicated that parents do not communicate with children about sex and AIDS, which is most likely due to cultural barriers.

In addition to the qualitative research discussed above the following strategies were developed:

1. Conducting a KPC survey for the district in order to assess current knowledge, coverage and practices on child survival issues relevant to project interventions, and to the planned HIV/AIDS intervention in particular,
2. GPS mapping of the locations of home-based care providers who have been trained through the DOH to provide services to households in Ndwedwe District.

A 2000 KPC survey was undertaken to assess baseline HIV/AIDS issues at the start of the NDCSP's HIV/AIDS sub-project. This activity was carried out during March–May 2000, with technical assistance from the CSTS Project through a sub-contract from MACRO International. This was the first time that a survey was carried out in Ndwedwe district specifically designed to elicit information on orphan prevalence and community attitudes toward PLWA. Another innovative aspect of the research was that this survey also involved the first field testing of the new HIV/AIDS/STIs module and the revised KPC 2000 questionnaire, developed jointly by the PVO Collaboration and Resources Group (CORE Group) and the Child Survival Technical Support (CSTS) Project. A KPC survey was again conducted as a baseline for the Phase II project. The highlights of the HIV/AIDS/STIs results from the 2000 and 2001 KPC surveys are as follows:

- *HIV/AIDS awareness is very high* with 94% of mothers having heard of it in 2000; however, only 74% stated they were aware that it could be prevented. The KPC 2001 data indicates that 93.3% of the mothers have heard of AIDS, while 88.5% were aware of ways of prevention.
- In 2000, 86% of mothers knew that condom use substantially reduces the risk of transmission, and 46% cited abstinence as an additional method; however, *negligible proportions of mothers cited limiting partners (8%), avoiding sexual contacts with commercial sex workers (2%), or avoiding sexual contacts with persons who have multiple partners (4%)*; 81% were aware of mother to child transmission, but *only 22% knew that mother to child transmission could be prevented*. KPC 2001 data indicates that 68.5% of the mothers knew of two or more ways of transmission of HIV/AIDS from a mother to the child.
- *As many as a third of the mothers surveyed in 2000 expressed a reluctance to provide care for a relative suffering from AIDS*, indicating widespread stigmatization associated with the disease despite the fact that the local Zulu culture strongly promotes caring for ill relatives in general; further, only 56% stated they would allow their child to play with an HIV infected child, and 23% stated they would NOT allow a teacher with AIDS to continue teaching their children. KPC 2001 data indicated that 68.3% of the mothers/caregivers were willing to allow a child under their care to play with an HIV-positive child.

- *More than 40% of mothers surveyed in 2000 did NOT know of any other STIs; knowledge of the signs and symptoms of other STIs in men and women was also very low. KPC 2001 data indicates that 73.1% of the mothers did not know any of the signs and symptoms in a woman that would lead to think that she has an infection.*
- *In 2000, 89% of mothers said that they were tested for HIV/AIDS during their prenatal visits; this is a puzzling finding since HIV/AIDS testing per DOH protocols is NOT carried out at clinics, where most of these women received prenatal care. It is likely that most mothers confused one of the blood tests done during prenatal visits such as the RPR for syphilis, with HIV/AIDS testing.*
- *86% of mothers surveyed in 2000 reported NOT using a condom during their last act of intercourse; this was despite the fact that as many as 35% stated they knew their husbands/partners had other partners, and a further 43% did not know for sure. KPC 2001 data indicates that 30% of the mothers reported using a condom the last time they had sexual intercourse. This pattern gains significance in the light that 44.7% of mothers reported they believed that their partners had multiple sexual partners.*
- *Although orphan prevalence was found to be low in 2000, with only 3.5% of children under age 15 having mothers who died, and 11.5% having fathers who died, 41% of these maternal deaths had occurred within the past one and a quarter years, and 72% of these paternal deaths had occurred within the past four years, indicating the increasing toll of the HIV/AIDS epidemic.*
- *Similar to the results from the mothers' survey during 2000, knowledge of HIV/AIDS was high among caregivers (88%); however, knowledge of prevention was found to be low, other than for use of condoms (86%) and abstinence (41%); further, only 60% were aware of mother to child transmission during pregnancy, 46% during delivery, and 50% through breastfeeding.*
- *29% of caregivers surveyed during 2000 said they would NOT be willing to provide care to a relative suffering from AIDS, and an additional 17% were not sure; further, 40% of caregivers stated they would NOT allow a child under their care to play with an HIV infected child, and an additional 13% were unsure; similarly, 24% said they would NOT allow a teacher infected with HIV/AIDS to teach a child under their care, and an additional 22% were not sure, again providing an indication of the high levels of stigmatization associated with the disease within the communities.*
- *Only 29% of caregivers surveyed in 2000 were aware of other STIs besides HIV/AIDS; similar to the mothers' findings, knowledge of specific signs and symptoms of other STIs among men and women was found to be low; condom use was also found to be very low, with only 7% having used one during their last act of intercourse, 54% stating they had not, a further 21% stating they had never engaged in intercourse, and 15% refusing to answer the question.*

Although many mothers have considerable knowledge about HIV/AIDS and STIs, their practices in many cases are not concurrent with expected behaviors. They still have multiple sexual partners and their reported use of preventive methods such as condoms was very low.

Discussions with project staff indicated multiple probable reasons for these practices:

- (a) Fear of losing their men and the financial support that they currently have.
- (b) Use of condoms provides no enjoyment and it questions “trust and relationship.”
- (c) Male dominance in decision-making and the fact that, culturally, a woman has to respect men and be “submissive.”
- (d) Being single and losing a man is culturally and socially looked down upon by the community.

Project staff has a positive attitude towards addressing the HIV/AIDS epidemic. It is generally felt by the team that HIV/AIDS is beyond simply being a medical problem and that there is the need for an integrated comprehensive package (economic, human rights, etc.) in addressing this issue. They feel that the message of “one partner” is easier said than done and that there needs to be a balance between promoting messages about the different ways to prevent HIV (i.e., abstinence, condoms, and being faithful). In addition, they feel that people should be motivated and encouraged to make their own choices. They feel that women’s access to female condoms is very limited, if not unavailable, and therefore many women are dependent on men to make the decision about prevention methods.

An enema is often given to AIDS patients by traditional healers. In addition, project staff report that traditional healers have a practice involving using blades to cut patients’ bodies (usually joints) because it is believed to immunize against AIDS. The most dangerous practice associated with this is that the same blade is sometimes used for all members of the household. In many cases, relatives are unaware when a family member has AIDS as the person who is infected rarely reveals his status to family members. The HIV-infected family member may also not be aware of his or her HIV-positive status.

As a traditional practice, families also slaughter a goat and throw holy water around their houses to ward any evil spirits that they believe are associated with this disease. “Imbiza” is an herbal mixture made by traditional healer is given for AIDS patients. This probably helps to increase patients’ appetite and a feeling of wellness.

MCDI’s study called *Traditional Healers and the Biomedical Health System in the Ndwedwe District: Prospects for Collaboration*, funded by the Margaret Sanger Centre International South Africa, will provide insight about changing some harmful practices in the community, such as the one involving the use of blades mentioned above. This study is a major research initiative that will add to the body of knowledge about the knowledge, attitudes and current practices of traditional healers on the topics of STIs, HIV/AIDS, and reproductive health, and will also examine the relationship between traditional healers and the “biomedical” health system. The goals of this initiative include the identification of barriers to meaningful interaction, and the development of recommendations for improving collaboration between biomedical service providers and traditional healers. It is envisioned that the results of this study will assist in the identification of opportunities for potential collaboration and will support efforts to overcome the constraints that are currently dividing traditional and biomedical health systems on HIV/AIDS care and support.

Management of illness at home is a mixture of modern and traditional practices. The HBCVs have trained individuals in the community in providing care and emotional support to their sick

family members. They bathe, feed, clothe and take care of their day-to-day needs. Unfortunately, social stigma still hinders infected individuals from revealing their status and many families still say that they will not allow an HIV infected individual to live with them.

Many community members still believe that HIV positive people are bewitched, and therefore disclosure is usually not made about one's status. Although HIV positive people in the community often fail to accept their status, many approach traditional healers. Traditional healers sometimes tell the HIV positive person that he or she has "amagobongo," or the spirit of ancestors sitting on your shoulders and sucking your blood, which leads to loss of weight. It is estimated by the project staff that a high percentage of community members believe in this. In addition to the traditional healers research study outlined above, the project will carry out qualitative research (with both communities and traditional healers) to understand these unusual practices.

Families and individuals typically seek care when the following signs of illness are present: patient is bedridden, losing weight and not eating a lot, persistent cough, rash in mouth (thrush), and persistent diarrhea. The decision to seek care is usually made by the family head and depends on the age of the sick individual. The sick are often taken to a traditional healer first and then to a health facility. However, as the role and presence of HBCVs has increased in the community, access to care is improving for families. HBCVs are making a positive difference in the lives of HIV positive people by changing behaviors and increasing social acceptance of their condition.

There are no gender differences in care seeking and care giving practices relating to HIV/AIDS.

The existence of social stigma, poverty and unemployment, and cultural barriers preventing HIV positive people from revealing their status are the most important social, economic and cultural barriers to management and prevention of HIV in the target area.

### **3. DOH Policies/Strategies and/or Case Management Policies/Current Activities**

The DOH has policies on prevention of mother-to-child HIV transmission (MTCT), management of HIV positive pregnant women, rapid HIV testing, testing for HIV, feeding of infants of HIV positive mothers, tuberculosis and HIV/AIDS, management of occupational exposures to HIV, and the syndromic case management of STIs.

Testing for HIV may be conducted under certain circumstances and requires informed consent, as well as pre-test and post-test counseling. The standard adult guidelines for rapid HIV testing discuss the ethical and legal rights of patients, and the role and indications for rapid HIV testing, which includes HIV testing and counseling, diagnosis of HIV infection, diagnosis of HIV infection in areas without local diagnostic laboratories, occupational exposure to blood or body fluids that may be infected with HIV and epidemiological surveillance and screening. The guidelines also discuss the issues to consider such as home test kits, performing and interpreting rapid test results, predictive value of rapid tests in low HIV prevalence communities and issues regarding confirmatory tests for all patients who test positive on the rapid tests. Pre- and post-test counseling and rapid HIV test results, its implications for health care workers, counselors, and patients are also addressed.

Quality assurance and regulations concerning rapid HIV tests are also discussed within the guidelines. For patients with dual diagnoses of TB and HIV/AIDS, Directly Observed Treatment under Supervision (DOTS) is the recommended therapy. Two sputum smears are collected and if 2 smears are positive then the patient is treated as a new patient. A chest x-ray is advised only if the patient has one positive sputum smear or if the patient has 3 negative smears with no response to a course of antibiotics. If a patient has one positive sputum smear and a chest x-ray suggestive of TB, then the patient is treated as a new patient. Ideally, TB treatment should be started if there is a positive sputum smear or culture. People living with HIV/AIDS are more likely to have smear-negative, culture-positive pulmonary TB. Multidrug resistant TB is resistant to Rifampicin and Isoniazid, they should be referred to a MDR TB unit. Diagnosis of HIV infection is confirmed by a positive HIV test. According to the guidelines, voluntary HIV counseling and testing should be offered to all TB patients if pre- and post-test counseling by trained counselors and continuing clinical and counseling support are available. The standard adult regimens advised are attached as Annex IX.

During Phase I, MCDI introduced *rapid and simple STI/HIV antibody tests* developed by the Project in Appropriate Technology (PATH) in Ndwedwe. This was field tested by the NDCSP in a district hospital and a few clinics in the project area. A cost-effectiveness study of this initiative was conducted as well. The evaluation showed that by reducing the time requirements and travel costs for pregnant women seeking to know their HIV status, participation rates in testing pregnant women increase markedly, while improving the diagnosis and management of STIs and HIV-related diseases.

DOH guidelines state that cotrimoxazole is highly effective in preventing carinii pneumonia and toxoplasmosis and is recommended as a prophylactic for adults and children living with HIV/AIDS in Africa as part of a minimum package. The National HIV/AIDS policy guideline for the prevention and treatment of opportunistic and HIV related diseases in adults recommends cotrimoxazole 160/800 mg (960 mg) daily for all HIV positive patients (whether they have TB or not) who:

- (a) have symptomatic HIV disease(WHO clinical stage 2,3 or 4) or
- (b) have a CD4 count less than 200 cells/cubic mm or
- (c) have already had pneumocystis carinii pneumonia.

A cotrimoxazole prophylaxis dosing schedule for children is also recommended based on weight of the child. Contact investigation, monitoring progress in adult pulmonary TB, diagnosis of TB in children and their treatment protocols are advised in the guidelines. A detailed description to all the above is attached as Annex IX. The same annex includes protocols for feeding of infants of HIV positive mothers, prevention of mother-to-child HIV transmission and management of HIV positive pregnant women, syndromic case management of STIs and management of occupational exposure to HIV.

The DOH policies are based on WHO guidelines. The NDCSP facilitates implementation of the DOH HIV/AIDS policies according to the protocols.

During the past two years, the provincial DOH has been in the process of instituting a District Health System (DHS) for the first time in Ndwedwe. An interim District Health System

Management Team (DHSMT) has been named, and the NDCSP Project Manager is a member of the team. The DHSMT has been tasked with establishing a strong link between the health system and local communities by organizing and overseeing the activities of Community Health Committees (CHCs) throughout the District. MCDI has taken the lead in organizing six committees thus far, and others are in the planning stage. These CHCs have all identified HIV/AIDS as a priority concern, and the NDCSP Community Outreach Organizer is assisting them to develop an action plan to include BCC campaigns relevant to HIV/AIDS and other priority health problems.

In recognition of the fact that the epidemic is likely to outstrip the capacity of clinics and hospitals to provide routine care to PLWA, the DOH has trained a cadre of home-based care volunteers (HBCVs) to provide care to chronically ill persons in their own communities. A total of 150 have been trained for the project area, either by Osindisweni Hospital or by Sinosizo, a local Catholic NGO. No systematic supervision, monitoring or evaluation plan was developed or planned by the DOH however, so the NDCSP has taken responsibility for designing a supervision plan and implementing it with the view towards working with the DOH so that a sustainable structure is in place. In addition, the NDCSP will evaluate the skills of the HBCVs, and undertake follow-on training as needed.

The 6 clinics, 2 community health centers and 2 hospitals serving Ndwedwe offer reproductive health services, including antenatal care. Two of these clinics are Catholic Mission clinics, but the others are operated by the DOH. All DOH facilities provide free condoms. All Ndwedwe District health facilities offer testing for syphilis and gonorrhoea, but HIV testing is currently offered only at Montebello and Osindisweni Hospitals. At the smaller clinics, HIV testing is not carried out because there are no trained AIDS counselors at these facilities, and there are concerns about confidentiality. However, these clinics draw blood and send them to testing centers available for these purposes. There are plans to extend these services to Applebosch, Ndwedwe Community Health Centre, and to one or two other remote clinics. In collaboration with PATH and with the cooperation of the DOH, MCDI has introduced rapid testing for HIV and syphilis in selected facilities of the District. These rapid tests have been implemented on a trial basis, and cost-effectiveness analyses have been performed that indicate that the rapid HIV tests are a cost-effective option for government.

With the demand for counselors increasing and a shortage of trained counselors, the DOH has trained lay counselors in order to provide 1 to 2 counselors for each clinic. They are non-health, non-permanent professionals.

At present, the government only has draft policies in place for providing drugs (e.g., Nevirapine) to combat mother-to-child transmission in South Africa. According to a report of the Provincial AIDS Action Unit, MTCT activities have been initiated in selected sites, including King Edward Hospital as pilot testing centers. The NDCSP will attempt to introduce Nevirapine for prevention of MTCT. The issue of breastfeeding by HIV positive mothers is likewise controversial which has hindered development of clear government policies. The DOH policy is currently to provide accurate information to these mothers, and to leave them free to make their own decisions.

As a result of NDCSP discussions with the Head of the DOH, the Regional AIDS coordinator and Ndwedwe's District Health Manager, Ndwedwe will act as a pilot site for prevention of MTCT.

HIV/AIDS care services are provided by doctors, nurses, HIV/AIDS counselors and social workers, and HBCVs trained by the DOH in providing home based care. Currently no drugs are provided, except for drugs for opportunistic infections, which are only prescribed by doctors and nurses. The quality of HIV/AIDS related services offered in the community needs strengthening. For example, counseling services are not adequate. NDCSP staff report that social stigma around PLWA emanates even from health facility personnel. Therefore, the NDCSP will use the following training resources available for providers of HIV/AIDS services:

- (a) A ten day HIV/AIDS counselor training course (including a facilitator's manual) which was developed by DOH and was sponsored by CDC for training clinic counselors
- (b) National Department of Health comprehensive home/community based care training manual for National Home and Community-Based Care
- (c) Home based care program developed by the local NGO, Doctors for Life, for training home based care workers.

Discussions with staff indicate that the reporting relationship of HBCVs to the clinic nurses is not clearly defined. It was therefore felt that efforts should be made to better link the home-based care volunteers with clinics. The project will hold a workshop involving both HBCVs and DOH nurses to establish clear reporting relationships and to educate the HBCVs about the channels of appropriate referrals. Each HBCV will be linked with their respective clinic nurses. The projects' trained Home Based Care Supervisors are currently supervising the HBCVs on a routine basis. A patient profile checklist (included as Annex XVI) is used to evaluate their care giving practices. Feedback of the supervisory evaluation is given to each worker individually as well as shared in their regular meetings. This practice encourages a participatory solution to problem solving and ownership of the process. Regular feedback on the performance of the workers is given to the DOH authorities.

Refresher training for clinic nurses will be given to re-educate them on HIV-AIDS-related counseling and effective communication with clients. Once the government's policies on treatment using nevirapine are finalized, the project with the DOH, will train clinic nurses in case management using the DOH prescribed manuals. Currently there is no drug therapy for HIV/AIDS.

The Project's Training Coordinator who supervises the IMCI trained practitioners will also supervise the clinic-based HIV/AIDS case management practices. A definitive plan for this supervisory plan will be implemented after discussion with the DOH.

With support of the NDCSP staff, providers in the community will be able to recognize signs and symptoms of HIV infection, and to provide adequate counseling and home based care for sick individuals. They will also know when to refer a sick client. In some cases, the HBCVs have to be re-oriented on the channels/systems of referrals.

#### **4. Intervention - Specific Approach**

As noted above, the NDCSP's HIV/AIDS component will concentrate on three types of activities: those aimed at preventing new cases, those aimed at strengthening families' and communities' willingness and capacity to care for orphans and vulnerable children (OVC), and those aimed at supporting and improving home-based care of PLWA. As part of these activities, the NDCSP will strengthen the capacity of the DOH to respond to the HIV/AIDS epidemic. This will be carried out through development of coordinating structures, such as regular meetings between stakeholders and role-players in the District. Currently, HIV/AIDS activities suffer from the same fragmentation that afflicts other health initiatives in the District. The NDCSP's capacity building work with the DHSMT will contribute to the effort to establish coordination and reduce redundancies. In addition, the NDCSP will work with the Ilembe Regional Council, the Ndwedwe District AIDS Task Team and other bodies with HIV/AIDS-related mandates.

The target groups for the project's HIV/AIDS related activities include pregnant women, mothers with children under 5 and their families, and school-aged children.

The following activities are planned:

##### **A. Prevention**

1. *School-Based Prevention of HIV Transmission:* The NDCSP's partner organization, DramAidE, is now in the process of organizing School Health Clubs in Ndwedwe area high schools. Four SHCs have been organized, and another four are soon to be initiated. Through these clubs, students develop songs, dances, poetry, plays and posters that promote AIDS awareness and urge the adoption of healthy behaviors. The SHCs organized by DramAidE will act as seed schools, in that each will catalyze the organization of SHCs in one or more sister schools in their vicinity. DramAidE will also carry out life skills training in these schools and will train teachers to implement life skills courses in future. DramAidE will also train 10 out-of-school youths to develop and produce an HIV/AIDS play aimed at encouraging healthy sexual behavior.
2. *Behavior Change Campaigns by Community Health Committees, TBAs, CHWs, HBCVs, and traditional healers:* Members of the CHCs and the above community based workers organized by the project will be asked to participate in the planning and implementation of a BCC campaign. Their role will be to collaborate on developing and field-testing messages, identifying key communication channels, and planning events such as women's days, health fairs that will enhance public willingness to openly acknowledge and discuss HIV/AIDS. Training will be provided to them as needed to carry out these functions. Active participation and involvement of CHCs will impact decision making at the grassroots level. HIV/AIDS key messages will be incorporated into the integrated BCC strategy that will be developed based on lessons learned from the pilot sites of HH/C-IMCI in South Africa. Key messages will also be channeled through the community radio station that the project will develop in partnership with the DOH.
3. *Strengthening Capacity of the Local DOH to Carry Out BCC Campaigns:* The NDCSP will work with the planned School Health Promotion Program of the interim DHSMT to improve their BCC-related skills and planning capabilities. The goal of this activity will be to

strengthen the District Health System's capacity to implement behavior change communication programs in the schools. The NDCSP will establish linkages and synergistic collaborative relationships between the DOH's School Health Promotion Program and the NDCSP/DramAidE program in the District.

## **B. Home-Based Care of PLWA**

4. *Support and Supervision of Home-Based Care Volunteers:* A consultant from the Academy for Educational Development (AED) visited Ndwedwe in early 2000 to assess the quality of the training that has been provided by government. The curriculum was examined for accuracy and comprehensiveness and an informal evaluation of the knowledge levels of a small sample of HBCVs was carried out in the field. The consultant found the HBCVs to be knowledgeable about the risks and care of people affected by HIV/AIDS, but deficient in skills needed to provide counseling, particularly psycho-social counseling. Based on the results of this assessment, follow-on training has been emphasized. Project staff have made a supervision plan and conduct regular supervisory visits in collaboration with the Interim DHSMT of the HBCVs. The NDCSP Home-Based Care Nurse serves as a technical advisor to the HBCVs and will assist them in carrying out their tasks when needed. A supervisory tool is being used to assess patients' needs before being enrolled for service. This tool is also used during assessment visits to measure the impact and effectiveness of services. The form is used for every patient visited or interviewed. A more comprehensive version will be developed from a community based monitoring tool (see Annex XVI). This tool will be used by the HBCV supervisors.
5. *Nutritional Care and Counseling of PLWA:* Recent studies<sup>10</sup> have indicated that HIV-infected and AIDS-affected individuals have increased requirements for basic energy, protein and micronutrient-rich foods in order to avoid oxidative stress. Oxidative stress is thought to increase HIV replication and to lead to higher viral loads and more rapid disease progression. The NDCSP will therefore assess the factors affecting the nutritional status of PLWA in Ndwedwe District. The goal of this assessment will be to identify the constraints – whether in access to nutritious foods, knowledge about nutrition, or difficulties with food preparation – that prevent PLWAs from achieving optimal nutrition. It is expected that, among other things, the resulting interventions will include training in nutrition and counseling during follow-up training for home-based care workers. This training will emphasize the importance of early nutritional intervention. Home based care workers will help PLWA and their caregivers to identify locally available and affordable foods that will satisfy the nutritional needs of PLWA, and, if necessary, will demonstrate their preparation. Discussions with Ms. Mandisa Dlamini, the Regional HIV/AIDS Coordinator for KwaZulu Natal province, revealed the DOH's interest in collaborating with MCDI in promoting and making available improved nutrition for HIV affected individuals.
6. *Prophylactic Use of Cotrimoxazole to Prevent Opportunistic Infections:* Currently, the government of South Africa has a clearly stated policy related to prophylactic use of Cotrimoxazole for this purpose. Cotrimoxazole is a prescription drug in the Republic of South Africa (RSA) and is prescribed by a physician or PHC nurse. Home based care volunteers

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<sup>10</sup> Piwoz, Ellen G. HIV/AIDS and Nutrition: An Update on Current Knowledge. Entebbe Uganda: Presentation at Makerere University Regional Quality of Health Care Centre Conference. February 2000.

will be trained to counsel PLWA and HIV positive individuals to visit a health facility to obtain HIV counseling, testing and care. As an extension of their role, the HBCVs are being trained by Sinosizo (a local NGO) as DOTS volunteers for TB patients, to ensure compliance. This training has been initiated as requested by the DOH and the project perceives a greater role as it is exploring new initiatives to address the dual epidemic of HIV and TB. The project anticipates that it may be important to expand its HIV/AIDS activities to include an emphasis on control of tuberculosis and will explore potential outside funding opportunities in collaboration with Sinosizo.

7. *Basic Orientation of School Children to Home-Based Care:* In the expectation that many young teenagers and children will be members of households with a sick parent or sibling, DramAidE and MCDI's Home Based Care Nurse will provide basic information to members of the School Health Clubs. This information will include universal precautions when handling body fluids of ill persons and recognition of opportunistic infections (such as pneumonia) that require immediate treatment. Although the intention is not to train these students to be home based care workers themselves, they will be given a basic orientation to the principles of home based care. In addition, DramAidE will organize Health Forums that will link members of the clubs with the Home-Based Care Volunteers in the areas near their school.
8. *Cost-effectiveness study of HBCV activities:* In follow up to his cost-effectiveness study of rapid HIV testing in Ndwedwe, MCDI's Senior Health Economist will conduct a cost-effectiveness study of the home based care activities underway through the project. This research will provide insight into the potential sustainability of these activities following the completion of the project in 2005.

### **C. Care of Orphans and Vulnerable Children**

9. *Material Support and Monitoring of OVCs by Community Health Committees:* With the support of the NDCSP, CHCs have initiated Orphan and Vulnerable Children Registers (Annex XIII) to track the condition of children in need in their communities. One purpose of the registers is to ensure that the CHC is aware of the condition of these children and alert them to the possibility of neglect, abandonment, abuse or destitution. When such cases are identified, they are referred to the Department of Welfare or other appropriate government agency. In addition, the CHCs are being assisted to plan for the material and other (see below) needs of OVCs in their Registers. An Ombudsman or woman will be identified to assist families in accessing the existing government resources, such as foster grants from the Department of Welfare. CHC members are being encouraged to plan mentoring programs in which community volunteers will visit OVCs and explore recreational opportunities for children well enough to enjoy them. They will also be trained to convey critical community messages that will discourage stigma and abandonment, such as messages attacking the prevailing belief that all infants of HIV-positive mothers are themselves HIV-positive, and will soon die.
10. *Training HBCVs, CHWs and CHC Members to Address Psycho-Social Needs of OVCs:* As part of their follow-up training, HBCVs and CHWs will be trained to develop an awareness of the psycho-social needs of OVCs and to counsel their communities and caregivers, as well

as OVCs themselves, in these areas. As per the recommendation of the AED consultant who visited the project, the following components have been included in the training curriculum for HBCVs:

- ? Infected parents should be supported to fulfill their parenting roles. Succession planning will be undertaken to assist parents in making plans for the care of their children after they are gone.
- ? Enable children to express their fears and concerns about a parent's illness
- ? Encourage children to express meanness or unfairness inflicted on them by other children as a result of their parent's illness
- ? Discuss what will happen to children and who would care for them
- ? Train teachers to recognize and respond supportively to children whose behaviors are against the prevailing norms (disruptive, withdrawn, drop in academic performance). These behaviors can result from distress over the illness or death of a parent.
- ? Encourage and support communities to conduct structured recreation, art, cultural and sports activities that enable OVC to integrate socially
- ? Encourage regular home visits to children living alone to ensure ongoing care for orphans, and
- ? Provide counseling services and community-based intervention for non-responsive children.

11. *Targeting of Non-Maternal Caregivers for Child Care Education:* The KPC 2000 Survey indicated that approximately one in five children in the district is under the care of a non-maternal caregiver. Further, the KPC 2000 study supported the suggestion that care given to children by non-maternal caregivers is measurably inferior to that provided by the child's own mother. Since the number of households without a living mother is certain to increase, non-maternal caregivers will be the targets of educational campaigns designed to improve their care-giving skills. As a large proportion of these caregivers are grandmothers of the children they are caring for, the traditional birth attendants (TBAs) previously trained by the project will be encouraged to hold educational sessions for participants at pension collection day gatherings, churches and other venues.

12. *Developing A Model Crèche Program for OVCs:* In collaboration with TREE, a partner NGO devoted to early education, and with the local NGO Doctors for Life, the NDCSP will develop a model crèche. This model crèche will carry out growth monitoring to track the nutritional well-being of children in their care, and will carry out basic support services for OVCs such as food supplementation; collection of clothing, books, blankets, etc., for families supporting such children; and regular health check-ups with the DOH. MCDI's staff social worker and trained psychiatric nurse (the Training Coordinator) will visit the model crèche to assess the counseling needs of the OVCs. Plans are under way to collaborate with the local NGOs "Child Line" to tap their expertise in care of OVCs and "RAGE" a group that provides toys and assists in renovating buildings. Other potential partners are Ekaya, a local group that also provides care services for OVCs. Discussions have opened doors for possible collaboration. If this proves to be a successful activity, it will be promoted to government as a model for scaling up within the Province.

13. *Training Facility-Based Nurses in Counseling Skills to Discourage Abandonment by HIV-Positive Mothers:* Because there is a rising tide of HIV-positive mothers who abandon their

infants in KZN hospitals and clinics, the NDCSP's Training Coordinator will develop and carry out a workshop for facility-based health personnel aimed at sensitizing them to the problem of abandonment of infants by HIV-positive mothers. These service providers will be trained to understand the concerns of HIV-positive mothers, to identify mothers likely to abandon their infants, and to offer supportive counseling to these women. This counseling will include teaching these mothers to care for AIDS-affected children and alerting them to the existence of social welfare services that are available from government and NGOs active in the area. Counseling will also link these mothers with the CHCs near their homes, so that the CHCs can ensure that they are able to access community-level assistance.

14. *Exploring Micro-enterprise schemes for AIDS-Affected Households and Those Caring for OVCs:* The project will visit and assess local micro-enterprise initiatives that are feasible and are of interest to the community. Potential business opportunities will be explored with the CHCs, through links with the Department of Social Welfare. The CHCs will be prepared to write proposals. Linkages will be established with University of Natal Center for Rural Development, which has expressed an interest in partnership with MCDI for micro-enterprise activities. Parents living with AIDS will be targeted for these activities in order that they remain economically viable as long as possible. Families caring for OVCs will also be given special priority. This micro-enterprise activity will prove crucial in sustaining the OVC activities.
15. *Strengthening the Ilembe Regional Council AIDS Coordinating Committee:* The Ilembe Regional Council is responsible for an area that includes Ndwedwe, as well as a number of other districts in KZN. NDCSP has contacted the Ilembe Regional Council to discuss a possible coordinating role for MCDI. The project proposes to organize and coordinate activities in Ndwedwe District, and facilitate linkages with the larger community of organizations and individuals working on HIV/AIDS in the Ilembe Region. A system of quarterly meetings for organizations active in Ndwedwe will be established, and the project will approach these meetings as an opportunity to share results and lessons learned, and to develop an over-arching plan of action based on these shared experiences.
16. In addition to the above, the project's partnership with the Diakonia Council of Churches is being broadened (see Annex III for Memorandum of Understanding). This will strengthen the faith-based approach to AIDS at the community level, as a large percentage of the Ndwedwe population is Christian. In each congregation, a volunteer is identified to provide support to people living with AIDS in the community. The memorandum of understanding details the prospective collaborations MCDI will have with the Council of Churches and workshops that will be implemented during Phase II.
17. At the facility level, counseling sessions are provided by trained counselors. The clinics provide counseling and draw blood, which is sent to testing hospitals such as Osindisweni, Montebello and Ndwedwe Central Community Health Centre. In addition, the DOH has trained 82 lay counselors in Ndwedwe who will be affiliated with clinics. VCT sessions will be initiated at clinics after sufficient staff is trained as counselors. Plans are also being explored to pilot test VCT at youth clubs operating in the communities.

18. The project's HIV/AIDS/STI activities will be linked with maternal and newborn care activities, especially with respect to HIV/STI screening for pregnant women and in HIV case management of children using the IMCI approach (Annex VIII).

## **5. Behavior Change Communication**

The NDCSP's primary health education messages relating to HIV/AIDS/STIs will be drawn both from the accepted repertoire of messages utilized by other organizations in South Africa and from the specific results of the KPC survey and qualitative studies carried out by the project. Formative research already completed during Phase I suggests that future HIV/AIDS/STI behavior change activities should include the creation of additional School Health Clubs to influence social norms related to high-risk HIV/AIDS behaviors among youth; and working with local figures of authority and respect such as area church leaders and tribal authorities. Before implementation of these messages occurs, however, subsequent qualitative analyses using the BEHAVE Framework will be utilized to identify additional information about community members, including their behaviors, factors that influence these behaviors, and activities that are most appropriate based on this assessment. Messages will then be pre-tested in the field and reviewed by the provincial and regional DOH to ensure compatibility with the government's policies and objectives.

The health education messages outlined below are based on MCDI's previous experiences in the project area as well as initial planning undertaken with project staff and local partners.

The NDCSP's BCC strategy seeks to accomplish the following under its HIV/AIDS/STI intervention:

- ***Increase condom use:***

The following key messages are planned:

- HIV/AIDS is primarily a sexually transmitted disease, and here in Africa is mostly spread by unprotected intercourse with an infected person. The proper use of condoms makes sex safer ("Better safe than dead"), because the virus cannot penetrate a condom.
- Even faithful lovers are wise to use condoms if either one of them has ever had a previous sexual partner (unless he/she has been tested for HIV and found negative). You cannot identify an HIV-infected person by sight, since he/she may show no signs of illness for years.
- If you are sexually active, be prepared – carry a condom.
- A condom can be used only once ("One condom, one round").

- ***Decrease stigmatization of PLWA and AIDS orphans.***

The following key messages are planned:

- People living with AIDS need love, care and support from family, friends and health workers. We should never shun or discriminate against people living with AIDS.
- Children and adults living with AIDS suffer from many of the same illnesses (diarrhea, respiratory infections, etc.) as other people. They should be cared for and given medical treatment just as other sick people are.

- It is unfair to judge a person living with AIDS. Although HIV/AIDS is primarily transmitted through sex, this does not necessarily imply that the infected person has had multiple partners. Although having multiple partners increases the risk, a PLWA may have been infected by a spouse and have had no other partner in his/her life. You should never assume you know how the PLWA became infected. HIV can also be spread by sharing sharp or penetrating instruments (for example, those used in cutting by traditional healers), so it is important to avoid this practice.
  - The majority of babies born to HIV-positive mothers are themselves HIV-negative and will live healthy and normal lives. People should not be reluctant to adopt these children on the assumption that they will die soon.
- ***Increase awareness of other STIs and their role in HIV transmission***

The following key messages are planned:

    - Having untreated sexually transmitted infections makes it much easier to become infected with HIV. Most STIs other than HIV can be cured, but it is important to get prompt treatment.
    - Be on the alert for symptoms of STIs other than AIDS. These symptoms may include unusual discharge from or sores upon the genitals, inflammation or swelling in the groin, painful urination and abdominal pain.
  - ***Increase empowerment of women and decrease the frequency of sexual exploitation of school girls and other young women.***

The following key messages are planned:

    - Women and girls have the right to say no. Whether lobola (a payment to the woman's father upon her marriage) has been paid or not, she is a person with full rights to control her own body. She should never be forced to have sex or unprotected sex against her will.
    - People should choose boyfriends or girlfriends in their own age group. If older persons ask you for sex, they are asking you to risk your life. You must protect yourself by refusing.
    - Young people are advised to say "no" until they are mature enough to make wise decisions ("It pays to delay," "True love waits."). However, sex without penetration (such as ukusoma or mutual masturbation) is safer than intercourse with penetration.
    - Young persons, especially young leaders, can help their community by leading the fight against AIDS. They must take responsibility for their own lives and also assist their families and communities to care for and support those in need.
  - ***Decrease misinformation about AIDS:***

The following key messages are planned:

    - You cannot acquire HIV/AIDS from a PLWA through casual contact. You cannot acquire HIV infection by sharing eating utensils, chairs or clothing.

- People infected by HIV can live productively for a long time, especially if they eat a well-balanced diet, and avoid alcohol, tobacco and drugs. A healthy life style boosts the immune system and positive living strengthens it.
- No one has found a cure for AIDS. Claims by some traditional healers that they can cure AIDS are not true.

Health education messages will be disseminated through a variety of channels and mechanisms. At the community level, the NDCSP's Community Outreach Organizer and the Social Worker will ensure that all members of the Community Health Committees, and all CHWs, HBCVs and TBAs will be systematically trained to use the integrated BCC strategy that will be developed based on lessons learned from the HH/C-IMCI pilot sites in South Africa (e.g., World Vision at Bergville). These community partners will be trained to communicate these messages persuasively throughout their community networks. Funeral Clubs, which are ubiquitous in the project area, will also be explored as a potential venue for discussion of the causes of the ongoing acceleration in death rates, and of ways to halt the spread of the epidemic and meet the needs of those affected. The NDCSP will follow up on the contacts that have been initiated with area church leaders, and will ask these leaders to assist with the dissemination of those of the messages that are compatible with their belief systems.

In the schools, DramAidE will disseminate a very similar set of messages through the School Health Clubs they have organized in Ndwedwe area schools. Among the youth, these efforts will establish an alternative "peer culture" among that is supportive of behaviors that inhibit, rather than foster, the spread of AIDS. Life Skills Counseling carried out through the School Health Clubs will help youngsters learn to negotiate with partners for behaviors that protect both parties against the possibility of infection. The members of School Health Clubs will be expected to initiate discussion among their peers and, by serving as role models and as effective communicators, to exert a positive influence on behavior patterns in their own, and in sister schools.

In addition, MCDI will explore different opportunities for collaboration with Vuleka Productions, a Durban-based group that has developed various media programs with the goal of eliminating social stigma relating to HIV/AIDS. Examples of the topics of Vuleka's films include: exploring why people are afraid to talk about HIV/AIDS and the role of young men and women in providing psychosocial care and support for young children. Vuleka staff has met with MCDI staff in Washington to begin discussions about possible collaborations.

At the health system level, these messages will be discussed with facility-based nurses during their counseling training. These nurses will be encouraged to utilize these messages as part of their core communications with patients, and to disseminate them through health education sessions on antenatal care days. Although fliers and posters are seen in clinics, pre-testing of posters and fliers in Phase I of the project revealed that women do not read posters and flyers they see in the clinics. Thus, the project's activities will encompass more comprehensive and participatory learning processes at the community and household levels using the integrated approach involving community-based workers and described above. Follow-on training will be provided for already trained Home-Based Care Volunteers to reinforce and familiarize them with integrated BCC package, key messages and with methods of transmitting them to the community members they meet in the course of their daily rounds.

## 6. Quality Assurance

According to the March 2001 health facility survey report conducted by MCDI, Osindisweni and Montebello hospitals had trained AIDS counselors and medical social workers to provide quality-counseling services. The hospitals had staff trained in HIV/AIDS clinical diagnosis and in providing counseling, psychological support and coping with PLWA. In varying degrees the clinics also had these trained resources. The NDCSP will work with the DOH in standardizing and establishing a monitoring system that will help enhance quality. An orphan register, which is currently being used, helps to collect information at the community level and ensures that all OVC have access to services.

Home based workers are supervised by the AIDS/PHC Supervisor and the HBC Trainer. In addition, from time to time workshops are organized which give the HBCVs an opportunity to discuss their work and create a learning opportunity.

Training checklists to measure the quality of CHW training are being used, as is a patient profile checklist to measure the activities of home-based care volunteers (Annex XVI). However, the appropriateness of this tool will be reviewed and possibly modified based on analysis of other community based monitoring tools in existence. Another checklist developed by Doctors for Life for HBCVs is used to guide the worker on the activities that they have to do and also serves as a checklist for supervisors.

According to project staff, HBCVs visit approximately three homes a day. The HBCV will usually visit a particular home once a fortnight, however this varies depending on the physical condition seen in the home.

## 7. Availability of Drugs/Supplies

MCDI's health facility assessment report of March 2001 indicates that syphilis test kits are available in two of the six clinics surveyed. No kits were available at Montebello and Osindisweni hospitals.

During Phase I, MCDI introduced *rapid and simple antibody tests* for HIV and syphilis, which were developed by the Program in Appropriate Technology (PATH). These tests were field tested by the NDCSP in a district hospital and a few clinics in the project area. A cost-effectiveness study of this initiative was conducted as well. The evaluation showed that by reducing the time requirements and travel costs for pregnant women seeking to know their HIV status, participation rates in testing pregnant women increase markedly, while improving the diagnosis and management of STIs and HIV-related diseases. For Phase II of the project, MCDI will explore the feasibility (and acceptance of the DOH) of purchasing the same testing materials to use in additional health facilities throughout the district.

The NDCSP introduced rapid testing for syphilis at Oakford Clinic, where staff found the test process to be a very efficient tool in identifying and treating syphilis in women attending the antenatal clinic at a single visit. During the Final Evaluation of the Phase I project, it was stated in an interview with the nurse in charge that the on-site test helped to raise awareness among clinic staff about syphilis and that quality assurance cross-testing at Osindisweni Hospital helped

to emphasize that the prevalence of syphilis among antenatal attendees at the clinic was higher than anticipated, as well as confirming the reliability of the test process.

With prevention of MTCT now designated as an official activity of the DOH, the DOH will be responsible for arranging necessary supplies and conducting all testing activities. The project will support the transition of these activities to government, ensuring the sustainability of the activity after the project ceases to exist. The project will also support appropriate monitoring of supplies using a monthly clinic essential drugs list medicine report which will monitor procurement, expiry dates, statistics of clinic attendance and clients receiving and not receiving medicines and indicators on drug stocks. All used needles will be disposed off according to waste disposal policies in place.

## **8. New, Innovative Activities or Strategies**

Recent developments in treating mothers with Nevirapine just before delivery and the infant just after delivery have had success in reducing HIV transmission even among women exclusively breastfeeding for three months and weaning. Upon approval from the DOH, the project will initiate provision of Nevirapine to prevent mother-to-child transmission of HIV/AIDS. The DOH is currently pilot testing the use of this anti-retroviral in a few hospitals throughout the country, and the Ndwedwe DOH is also pilot testing at King Edward hospital. Once the initiative has been fully endorsed by the DOH, the project will support the DOH with supplies of Nevirapine and in training the DOH staff in its application.

The project has been encouraged by a donating organization to apply for free supplies of Nevirapine as well as Bactrim/Co-trimoxazole, which has been shown to prevent certain opportunistic infections (e.g., bacterial pneumonias and diarrheal diseases as well as certain septicemias). It may also protect against toxoplasmosis, a parasitic brain disease, and isoporiasis, a parasitic infection of the intestines.<sup>11</sup> If received, these donations are anticipated to provide all needed supplies for the HIV positive women and children of Ndwedwe.

## **B. CONTROL OF DIARRHEAL DISEASE**

Diarrhea has been chosen as one of the project's main interventions because of its high incidence and community concern. The project's level of effort for this intervention will be 20%, the same as during the NDCSP's first Phase. The national government estimates that in South Africa overall, gastrointestinal diseases are responsible for slightly more than one-quarter of infant deaths among the African and "colored" peoples. Diarrheal diseases are one of the most common sources of infant and child morbidity in the project area, and two dysentery epidemics have been reported in Ndwedwe District during the last two years. According to the Ndwedwe District Health Information System, there were 5,692 new cases of diarrhea among children under 5 years of age during 2001. Sporadic outbreaks of cholera occurred in the Project area in January 2001 and a total of 8200 cases were reported in 2001.

The project's objectives for meeting these diarrhea case management challenges are: 1) 85% of mothers will give the same or extra liquids during diarrhea, 2) 90% of mothers/caregivers will

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<sup>11</sup> UNAIDS/WHO *Hail Consensus on Use of Co-trimoxazole for Prevention of HIV-Related Infections in Africa*. Press Releases 2000. <http://www.unaids.org/whatsnew/press/eng/geneva050400.html>.

give oral rehydration solution (ORS) to the child under their care during diarrheal episodes, and 3) 50% of mothers/caregivers will wash their hands before feeding the child. These objectives are based on the KPC survey results, which indicated that 74.1% of mothers/caregivers know how to make a sugar salt solution, but early administration of liquids and enhanced catch-up feeding are weak. The results also indicated that a very low 18% wash their hands. The project's health messages will therefore include reinforcement of the use of ORS, as well as methods of prevention.

Relevant activities will include expansion of IMCI training for PHC nurses in the cost-extension area and refresher training for previously trained nurses. Community based behavior change communication activities using CHWs, HBCVs, TBAs, and traditional healers will be initiated as well. They will emphasize ORS, hygiene and prevention, and supportive care and feeding during and after illness. An integrated strategy inclusive of diarrheal and other child survival interventions will be developed using the HH/C-IMCI materials piloted in South Africa (e.g., at World Vision's Bergville project). The DOH and the European Union have developed training curriculum and materials that also will be reviewed prior to adaptation.

## **1. Current Status/Coverage/Prevalence**

Clinic statistics collected in Phase I reveal that diarrhea and dysentery continues to be the largest causes of childhood morbidity among children under five in the District. The NDCSP November 2001 baseline study of children under two years, carried out during the rainy season, showed a two week period diarrhea prevalence of 23.9%. According to the Ndwedwe District Health Information System, there were 5,692 new cases of diarrhea among children under 5 years of age during 2001. Although prevalent throughout the year, seasonal variations in diarrheal prevalence are seen mostly during the summer and autumn months in Ndwedwe district.

No information is available on the importance of dysentery and persistent diarrhea as causes of death in children, but Shigella epidemics hit children particularly hard. However, the KwaZulu Natal Shigella Sentinel Surveillance System, which records new cases of bloodstained diarrhea, showed the Qadi area of Ndwedwe reporting only 1 case during September 2001. Dysentery in Ndwedwe is not thought to be resistant to antibiotics.

The problems families have accessing health care in Ndwedwe have been described under the **Major Opportunities and Constraints to Maternal and Child Health in the Sub-District** section of the **Program Site Analysis**.

## **2. Causes, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior**

Current knowledge and practices of mothers in the area regarding childhood diarrhea and the use of oral rehydration therapy were explored during the November 2001 baseline KPC survey. Baseline KPC survey results revealed that among the 32 children in the sample who had experienced diarrhea during the two weeks prior to the survey, 74.1% were reportedly treated with ORS packets and sugar salt solutions mixtures. Of all mothers and caretakers, with children under the age of 2 years, surveyed, 73.7% could correctly describe how to mix a sugar-salt ORT. Only 65.5% of mothers/caregivers sought advice outside the home when their child had diarrhea.

Although all women caring for children under five will be targeted, there will be an added emphasis in Phase II on improving the care seeking and home care practices of non-maternal caregivers. The KPC 2000 indicated that care of children with diarrhea by non-maternal caregivers is inferior to care given by the child's own mothers. Fully 20% of caregivers, for example, said they did nothing during the child's most recent diarrhea episode, while only 7% of mothers said they did nothing; and fewer caregivers than mothers had used any type of oral rehydration. In Phase II, a special effort will be made to reach these (usually older) caregivers with the oral rehydration message, through CHWs, HBCVs, TBAs, CHCs, pension day gatherings and church leaders. The Diakonia Council of Churches will carry out workshops for church leaders, while MCDI will train the CHCs and community workers and volunteers. Pension day presentations will be made by NDCSP staff and by TBAs trained by the NDCSP. Mothers will be reached through the channels established in Phase I, plus the new channels (churches, CHWs and HBCVs, and THs) planned for Phase II.

It is understood that a critical problem in home management of diarrhea is the failure of mothers to give more or even the usual amount of liquids during a diarrhea episode (only 65.5% did so), or to offer extra breast-milk or food during recovery. For this reason, the BCC program will emphasize early and continuous administration of extra liquids during illness and increased feeding afterwards. In addition, only 14.8% of the mothers/caregivers practiced hand washing before feeding the child. Health education messages will also focus on inculcating basic hygiene practices as hand washing, which is essential to control diarrheal infections. In addition, early introduction of foods and fluids is a problem here, so the project will encourage exclusive breastfeeding through at least 4 months, which is the government's policy. The project will conduct qualitative research to understand feeding practices and support behavioral changes.

The NDCSP will conduct PLA/qualitative research to be informed of current beliefs and gaps between knowledge and practice. Discussions with field staff have revealed that diarrhea often results from the following problems in the project area: lack of clean drinking water and toilet facilities, poor personnel hygiene, improper feeding (e.g., early introduction of food), and bottle feeding using dirty bottles. In addition, administration of an enema "uchatho" to get rid of spirits "inyoni" and "ithuku," often results in diarrheal episodes as well. During 2001, focus group discussions were conducted with five groups of mothers in order to increase their understanding of the causes of diarrhea and what a family can do to prevent children from suffering from diarrhea. Participants were first asked whether or not there are different types of diarrhea, and what action a mother should take when a baby or young child begins to have diarrhea. They were also asked whether they withhold breast-milk and/or food from a child with diarrhea. To identify available home fluids, the facilitator asked what liquids are commonly given to babies and children after they are old enough to be weaned from the breast.

Respondents in all five groups mentioned drinking dirty water or stream water among the causes of diarrhea. All groups also mentioned causes of illnesses centered on bottle feeding — dirty bottles, improperly mixed or diluted formula, and sour milk. Members of one group mentioned that feeding a young child too many green vegetables ("imifimo") could cause diarrhea, while women in another group said that babies are susceptible to diarrhea when teething. When asked how to prevent diarrhea, only two groups (Oakford and Wosiyana) mentioned exclusive breastfeeding, even though a majority of mothers in all groups reported that they were breastfeeding. Proper care of feeding bottles was mentioned at one meeting (Qadi), and women in

two groups (Ndwedwe and Oakford) said that adding a teaspoon of chlorine bleach to 25 litres of water would prevent diarrhea among those who drank it. The Thafamasi mothers said they do not know how to prevent diarrhea, although they had named dirty water and lack of breastfeeding among teenaged mothers as causes. Closer questioning of the mothers who mentioned the dirty water hypothesis revealed that some of them continue to use untreated stream water for drinking even though they know it can be dangerous. A few mothers at Ndwedwe and Qadi said that they now have access to clean tap water in their communities.

Three types of diarrhea were named in all three groups: liquid (or green liquid) diarrhea, bloody diarrhea and mucous diarrhea. Knowledge of oral rehydration was high in every group. When asked what a caregiver should do when a child begins to have diarrhea, rehydration with salt sugar solution (SSS) was named first and described (a half teaspoon of salt and eight teaspoons of sugar in a liter of water) in all five sessions. Available home fluids named were mostly fruit juices, either home-made or purchased in nearby shops. Cow's milk was also mentioned, as was a soya-based soup (*imana*). Virtually all the participants who were asked whether or not they withdraw breast-milk or food from a baby or child with diarrhea said that they do so. When asked why, they stated that feeding might exacerbate the condition, particularly if there was vomiting as well as diarrhea.

Through MCDI's experiences during Phase I, it was learned that although many mothers do approach clinics for treatment of serious diarrhea, there is an existing belief in a supernatural entity (symbolized as a swooping bird), which causes diarrhea. Among those adhering to this belief, supernatural cures from traditional healers (*isangoma* and *inyanga*) are often preferred. Mothers' beliefs about persistent diarrhea have not been well understood, but will be further probed during focus group discussions. Mothers believe that more food makes the child's diarrhea worse. Even trained doctors advocate wrong messages of reduced food.

Fortunately, NDCSP staff has progressive attitudes and beliefs regarding diarrhea. They perceive that general hygiene has to be emphasized, in particular, hand-washing as a key practice. In addition, they feel that provision of clean water and targeting grandparents is important. Further, they state that inter-sectoral collaboration with Department of Water and Sanitation, increased use of IMCI and messages reaching CHWs, HBCVs, TBAs and the communities are essential in treating and preventing diarrhea.

"Uhudo lwegazi" refers to dysentery. Parents will invariably seek medical help for this condition as blood is traditionally regarded as a serious symptom. "Uhudo" refers to diarrhea. "Ukhakhayi olushone phansi" refers to a sunken fontanelle. Mothers do not associate this condition with dehydration; instead, they believe this is caused by the influence of evil spirits. Some mothers/caretakers administer an enema ("uchatho") for diarrhea at home, which invariably accentuates the child's problem. Most parents only seek medical help when the child has already lost a considerable amount of fluids and they fail to accurately assess the degree of dehydration in a child. Therefore, there is the need to educate mothers/caregivers about the signs and significance of dehydration. This also includes feeding during and after illnesses.

Care seeking behavior varies with the type of caregivers. Younger mothers go to school, have less money at their disposal and fail to recognize diarrhea signs and symptoms. In general, mothers recognize a lethargic child and the frequent passing of stools as diarrhea. Usually, a child

with 3 or more frequent stools is taken to hospital. However, mothers/caregivers often fail to recognize dehydration. In many cases, the decision to go to a health care provider when a child is sick rests with the grandparents. However, people still do seek medical care/advice from traditional healers, before resorting to western medicine. In addition, while many mothers go to clinics for care, particularly since the Government started care for children free of cost, most mothers/caregivers only seek medical help after the child has lost considerable amount of body fluids. Dysentery, in contrast, is often recognized as critical early on because of bloody stools.

There are no apparent gender differences among caretakers who seek care for their child's diarrhea.

### **3. DOH Policies/Strategies and/or Case Management Policies/Current Services**

The DOH protocol for standard case management of childhood diarrheal diseases, including management of dysentery and of persistent diarrhea in children, follows the February 2001 KZN IMCI guidelines (see Annex VIII). These guidelines detail assessment, classification, treatment, and counseling protocols for children ages 2 months to 5 years and children ages 1 week to 2 months with varying severity of illnesses.

The DOH policies are consistent with WHO/UNICEF guidelines, and the NDCSP's case management strategies are consistent with DOH policies. While the project works at the district level, the lessons learned from the successful implementation of the DOH strategies on the ground will be used to inform policies and programs at the provincial and national level. For example, the project's activities relating to ORS will be discussed with the DOH with a view towards informing the current DOH promotion of SSS. In addition, the project's experience with the HH/C-IMCI approach will provide valuable lessons for possible expansion of the approach to other areas. For more information about the NDCSP's impact on DOH policy, see the section describing **MCDI's Role in Policy and Advocacy** under **Program Approach**.

The DOH has an active ORT promotion program in which clinic health educators teach mothers of diarrhea victims to mix sugar-salt solution. Packets of ORS are also available free of charge from all clinics, and they are sold in the many small stores that are scattered throughout the District. The main emphasis is on SSS and use of porridge, soup, or plain water.

The DOH has very tight control over antibiotics and anti-diarrheal medications, with clear prescription protocols. Currently, antibiotics are fairly well restricted to use in cases of bloody diarrhea, and anti-diarrheal medications are not heavily used in the management of childhood diarrhea. Unfortunately, discussions with the IMCI facilitator for the district indicate that there is an irregular supply of drugs. For example, the district had no IMCI drugs during February 2002. This issue is understood as more of a logistics management problem rather than shortage of supplies.

Both nurses and doctors provide diarrhea case management services at the DOH health facilities, and private doctors also provide case management services and prescribe antibiotics. Nurses are trained using the IMCI protocol. However, an independent IMCI evaluation conducted in 2000 revealed that case management practices are not satisfactory. The quality of diarrhea case management will be enhanced by the district's efforts to provide standard case management

practices using the IMCI protocol and supervision using the IMCI tools including: (a) checklist of facility supports, (b) checklist of the case management of a sick child by a health worker, and (c) caretaker interview for a referred child (see Annex XVII). The project has been requested by the DOH to facilitate supervision of IMCI at the clinics and therefore, a regular supervisory mechanism will be established by the NDCSP's IMCI-trained Training Coordinator. In addition, rehydration centers have been established in three clinics with NDCSP support for management of cholera cases. Further, CHWs, TBAs, HBCVs will be supervised by the clinic nurses to ensure that they teach mothers correct methods of diarrhea case management. They form the first link with mothers/families and are key in following-up with the education by nurses, which mothers/caregivers receive during clinic visits.

#### **4. Intervention – Specific Approach**

The level of effort devoted to control of diarrheal diseases is unchanged since Phase I. The diarrhea intervention will target mothers/caregivers with children age 0-23 months through activities at the community, health facility, and district levels.

At the community level, family members will be educated about home treatment of a child with diarrhea. The NDCSP will continue to inform mothers on key signs and symptoms that will enable them to recognize and seek timely and appropriate treatment from clinics. Most mothers/caregivers are well versed with preparation and administration of ORT, which helps to reduce the need for referring routine diarrheal cases. The project is also negotiating with the DOH to provide an ambulance in clinics, especially the remote rural clinics in the original project area (Wosiyana, Thafamasi) and the two new clinics (Asidumbini and Schipini).

CHWs, TBAs, and HBCVs will be trained about critical health education messages and ways of communicating these key messages as they form the front line health workers who are responsible for care of the family and for referring sick children to clinics. MCDI staff will train these community providers in:

- promoting hand-washing as a necessary household practice,
- promoting key messages relating to provision of continued fluids during diarrheal episodes
- continued feeding during illness and catch up feeding for children post-episode
- ORS preparation
- care for children with dehydration signs
- counsel mothers/caretakers to adopt ideal practices
- advise mothers/caretakers on when to return.

In addition, family members will be educated and made aware of the need to provide caretakers with some amount of money in order to facilitate immediate care if necessary.

CHCs are also a key partner for ensuring that the DOH initiatives are communicated to families, in addition to their role in actively participating in planning and decision-making at the community level. Both community health committees and crèche workers will receive BCC training for this intervention, and will use the DOH and MCDI developed educational materials for wider dissemination to mothers and families.

Further, while many community members have adequate access to medical facilities, mobile facilities will make them more universally accessible. CHWs, HBCVs, and TBAs assist nurses during the fortnightly mobile visits to the communities. During these mobile clinic visits, mothers will be educated to prepare and administer ORS correctly.

At the facility level, clinics follow the prescribed protocols of the IMCI approach in case management of diarrhea. Specific activities include:

- ORT corners have been established at the clinics with MCDI partnership to manage cholera cases
- Rehydration centres (for i.v.) have been established at 3 clinics for managing diarrhea and cholera cases. These centers are equipped with trained nurses and usually have adequate supply of ORS and intravenous fluids.
- Mothers who present at clinics are also educated on how to prepare ORS.

The project will continue to train and supervise DOH and private staff (e.g., at Oakford, etc.) and will develop training materials to improve their case management practices. Clinic nurses will be trained on how to counsel effectively, and then operationalize counseling in the clinical setting. CHWs and HBCVs will also be trained. This will be emphasized as a key element of standard case management. MCDI's health facility assessment conducted in March 2001, found that all six clinics (Wosiyana, Thafamasi, Nyuswa, Oakford, Quadi, Ndwedwe) have been trained in use of IMCI protocols; the project will facilitate refresher-training programs for these clinics. In addition, new training in the IMCI protocols will be conducted for clinic staff from the new target area Asidumbini and Schipini to ensure that all clinics in Ndwedwe district have a universal approach to case management.

The NDCSP Training Coordinator, who is trained in IMCI, is a key member of the district supervisory team. Weekly visits to clinics are conducted to supervise the case management practices using standard monitoring tools that have been developed by the DOH (see Annex XVII). These tools are based on the IMCI protocols and algorithms. The quality of the diarrhea treatment centers (DTC or ORT centers) are supervised based on the following criteria: (a) there is a functioning DTC, and children with some dehydration receive ORS solution at facility (b) there is adequate space to give ORT (c) there is a table (for mixing ORS solution, for providing demonstrations) and chairs for caretakers, (d) there is a source of drinking water, (e) necessary supplies are available (cups, spoons measuring/mixing utensils, 1 liter of water, sugar, salt), and (f) a DTC register is available.

Under normal conditions (i.e., during daylight when the roads are not impassable, something that often happens during the rainy season), clinic workers are able to radio for an ambulance to transfer a sick child from the clinic requiring referral to a hospital. The ambulances are usually able to arrive at the clinic within an hour. However, the case is quite different at night, when the clinic is ostensibly only open to receive maternity cases, and when ambulances will not go out at night for security reasons. In the absence of the ambulance service, it is often difficult for health workers to determine whether caretakers of children requiring referral will promptly seek care at a referral facility. To a limited extent, clinic workers are able to assess, based on their location and the time of day, the feasibility of obtaining transport to the referral facility in terms of availability of transport, location of the facility and the client's home, and ability of the family to

pay if commercial transport is necessary. If the clinic worker feels that the family will not be willing or able to find and/or pay for the commercial or public transport necessary for the trip to the hospital, they usually try to stabilize the child until transport is available or try to provide the best treatment possible at the clinic.

From the home to the clinic the CHWs, HBCVs, TBAs often help identify someone with transport who can take the mother and child, or will walk with the mother to help her carry the child. At night, it can be assumed that a mother or family member would not take a sick child to a health facility unless they have their own vehicle. A key activity the NDCSP will undertake in response to this situation is conducting PLAs with CHCs (formed in each community and linked with the DOH) to explore the potential of mobilizing a transport system at the respective communities, to transport sick children.

In addition, while severe cases of diarrhea are referred by CHWs, HBCVs, and TBAs to the health facilities, discussions with project staff indicate that there are weaknesses in these community providers' understanding of the channels of referral system. These community-based workers will be trained and each area worker will be linked with the facility nurses to assist mothers of very sick children to reach a health facility. However, during the rainy season, it is sometimes even difficult to reach a referral hospital from a clinic.

The referral system is based on the following protocol:

Childs' home → health-facility post or clinic → 2<sup>nd</sup> level referral (Osindisweni, Montebello, Mahatma.Gandhi Hospitals) → tertiary hospital. All severe cases of diarrhea are referred to King Edward and Addington Hospital.

The project's training will include a component on follow up of diarrhea and dysentery cases, which will be done according to the DOH IMCI protocols. A child with persistent diarrhea will be followed up after 5 days and the mother will be asked if the child's diarrhea has stopped and how many loose stools the child is having per day. If the diarrhea has not stopped (e.g., the child is having 3 or more loose stools per day), staff will be instructed to do a full reassessment of the child. They will then treat any dehydration present and refer to hospital. If the diarrhea has stopped (e.g., the child is having less than 3 loose stools per day), staff will be instructed to tell the mother to follow the usual feeding recommendations for the child's age but to give one extra meal every day for one week. Attention to the child's diet will be an essential part of the training for management of the child with persistent diarrhea.

For a child with dysentery, follow-up will be done after 2 days. Staff will assess the child for diarrhea, and ask the mother if the child has had fewer stools, and whether or not there is less blood in the stool, less fever, less abdominal pain and if the child eating better.

- If the child is dehydrated, staff will treat for dehydration and refer to hospital. If the number of stools, blood in the stools, fever, abdominal pain, or eating is worse, or the child is vomiting, the staff will refer.
- If the number of stools is the same or fever persists, the staff will add metronidazole to the treatment for 5 days. The mother will be advised to return in two days.
- If there are fewer stools, less fever, less abdominal pain, and the child is eating better, the mother will be instructed to continue giving nalidixic acid until it is finished. The staff

will be trained to ensure that the mother understands the oral rehydration method fully and the need for the child to have an extra meal each day for a week.

For younger children (ages 1 week to 2 months), the health provider will be trained to assess, classify and treat the new problem as per the IMCI “Assess and Classify” chart. A detailed description is attached as Annex VIII.

Assessment of success and failure will be based on how well the IMCI protocol and case management practices are followed. A successful treatment in diarrheal episodes will be defined as (a) the child passes less stools, (b) the child feeds and plays well, (c) the child’s weight increases, (d) signs of dehydration are checked and none are observed. A treatment failure in treating child’s diarrhea (especially persistent diarrhea reviewed after 5 days) will be defined as developing any of the following: (a) diarrhea has not stopped (child is still having 3 or more loose stools per day), (b) repeated vomiting continues, (c) marked thirst, (d) child does not eat or drink properly, and (e) mother is bound to go back to the clinic following day. All cases of treatment failure will be assessed for its cause according to the IMCI protocols. A child’s assessment will lead to rule out infections, such as HIV positive status. Mothers will be counseled about the importance of testing the child for HIV.

Mother/caregivers knowledge and practice of preparing ORT (ORS, SSS) and administration will be observed. As stated previously, of those mothers and caregivers responding to the 2001 KPC survey, 74.1% practiced administration, while 73.7% knew how to make an ORS solution correctly. Also, the practices of the mother with respect to feeding and hygiene will be observed. Incorrect practices, if any, will be corrected through training. The CHWs and HBCVs responsible for training mothers will be supervised to ensure that they give the right messages and teach the right method of preparation. Nurses who use the IMCI protocol in case management of diarrhea will be supervised to determine the right practices and counseling. Effective routine supervisory mechanisms will be reinstated. Measures will also be put in place to ensure that the child is referred at the appropriate time and to the right location to ensure timely availability of clinical care for a child in a critical state.

In addition, the project will work with traditional healers to improve their practices and to possibly stop the practice of using enema as a treatment method for diarrhea disease. Use of over the counter drugs is not commonly practiced in the region and there is no known pattern of drug resistance in the Project area.

## **5. Behavior Change Communication**

Although the level of effort devoted to control of diarrheal diseases is unchanged since Phase I, during Phase II, prevention of diarrheal disease and proper hygiene practices will receive greater emphasis within key health education messages promoted. The NDCSP will utilize a clearly defined strategy using the BEHAVE Framework, described under **Behavior Change Strategies** in the **Program Description** section. The project’s PRA/quality assessment specialist will utilize qualitative research methods (including focus groups, semi-structured interviews, etc.) to examine circumstances under which various treatment options are selected. More in-depth understanding of the local practices, beliefs and use of local terms to define disease will be used to develop messages that are culturally accepted, non-threatening and enables them to build on

their existing knowledge and identify with their culture. This will help mothers/caregivers know, for example, the importance of rehydration and catch-up feeding, and that they consult trained health workers in cases of bloody or persistent diarrhea.

However, Phase I experience and initial assessments provide some guidance into the behavior change approach to be undertaken and key messages that will be promoted to prevent diarrheal disease. For example, due to the fact that clinic statistics collected in Phase I reveal that diarrhea and dysentery are the largest causes of childhood morbidity among children under five in the District, prevention will therefore be emphasized, along with oral rehydration and continued feeding during illness, in all community-level activities. A variety of both new and proven channels of communication (such as church leaders, radio messages, mobile clinics, CHWs, HBCVs, and THs) have been identified to disseminate these messages broadly during Phase II.

In addition, the project's efforts will reinforce existing knowledge and use of ORS, promote exclusive breastfeeding through four months and encourage early administration of liquids and improved feeding practices during and after diarrhea episodes through a series of messages that will be tested using qualitative research.

MCDI is discussing with the National Progressive Primary Health Care Network (NPPHCN) and a local a non-profit public interest media organization, the possibility of using cassettes of radio programs they have developed and recorded as part of public education sessions on home management of diarrhea. These messages will be transmitted through sources discussed above, including crèche operators, CHWs, HBCVs, and TBAs. MCDI will work with its collaborating partners the Department of Health and local NGOs such as TREE, to develop their planned health education programs for community mothers and caregivers, and the crèche child to child activities. In addition, MCDI has been exploring the opportunity of developing school-based programs for older siblings of the beneficiary group in collaboration with the school-nursing supervisor of Ndwedwe. The CHCs will also mobilize communities for adopting positive behaviors. As key community-based decision making bodies, CHCs will assess the effectiveness of messages. Focus group discussions and individual interviews with CHWs, HBCVs, TBAs, CHCs and mothers will allow the project to get an idea of the impact of the messages on caregiver practices, and to make adjustments in Project strategies. The final KPC survey will measure several key knowledge and behavior changes.

The BCC strategy will address the high prevalence of diarrheal disease by adapting messages (based on DOH and other locally used modules) on hand-washing and use of latrine and safe water as major prevention methods.

The use of Jik (chlorine bleach) to disinfect water will be encouraged for those who use surface water. This apparently was well accepted during epidemics of dysentery and cholera. These skills will be encouraged through the child to child crèche and school programs, through the health education activities of CHWs, HBCVs, and TBAs, and through counseling of mothers by clinic workers. The effectiveness of the NDCSP's BCC activities will be evaluated through informal assessments of understanding of prevention methods and behavior change, as well as through comparing the baseline with the final period prevalence.

## 6. Quality Assurance

The NDCSP's CDD strategy will be implemented in the context of South Africa's IMCI program. The NDCSP will apply lessons learned from the Pilot Implementation Site for KZN (the site of World Vision's Tugela Child Survival Project) as well as from Phase I of the NDCSP (Ndwedwe has been one of the pilot introduction areas for IMCI training in the province). A three-pronged strategy is in place: 1) mastery of the clinical algorithm and its associated skills, 2) development of necessary institutional support (equipment, pharmaceuticals, etc.) and 3) implementing community-level IMCI. The NDCSP has assisted provincial authorities with organization and quality control for the first rounds of IMCI training in Ndwedwe. During Phase II, this will be expanded to the clinics and hospital in the new territory, and the Project will strive to ensure that, by the end of Phase II, all nurses who diagnose and treat children under five are trained in IMCI protocols. Quality of care will be a key focus of Phase II. Skills assessments will be carried out, weaknesses will be identified and refresher training scheduled as needed. The Project has established an IMCI Task Team within the DHSMT, and during Phase II the Task Team will monitor IMCI implementation to ensure that problems identified during Phase I are being effectively addressed.

Nurses are trained using the standard provincial training materials developed by DOH, based on the recommended WHO protocol for IMCI adapted as KZN IMCI guidelines in February 2001. Modifications and innovations were introduced to tailor the protocol to the needs of the province, such as the addition of an HIV/AIDS module to meet the growing AIDS challenge. As part of the IMCI protocol, ORT corners and ORT registers have been established. Although ORT corners have been established in all clinics except Wosiyana, problems have been identified during supervisory visits, including lack of associated education and maternal counseling. Training in BCC and maternal counseling for facility-based nurses is scheduled for Phase II, and ORT corners will be established at Wosiyana and all the new facilities to be included in the expanded Project area. The establishment of ORT corners will serve as key quality indicators in teaching mothers standardized practices.

In addition, as a result of implementation of the IMCI protocol, there is stock supervision using a checklist for facility assessment, (see Annex XVII) ensuring availability of regular non-expired ORS and essential drugs. The project collects information using an outpatient cases form and referral form (see Annex XI) to estimate the number of diarrhea cases reported at outpatient clinics and referred to hospitals. These forms are used monthly and help to estimate accurate reporting of diarrhea and other diseases at the community level. The IMCI supervisory tools, checklist of facility assessment, checklist for case management of a sick child and caregiver interview forms will help maintain quality IMCI management practices at the clinic level. In addition, as per the request of the DOH, a community-based monitoring tool will be developed to collect epidemiological information on child survival and maternal indicators, including information on children eligible for immunization and those immunized. These tools will be pilot tested and used by the CHWs, HBCVs, and TBAs trained by the project. This will result in ownership, increased community participation and decision making at the grassroots level.

## **7. Availability of Drugs/Supplies**

MCDI's March 2001 health facility assessment report states that all clinics in the original project area have ORT corners except Wosiyana Clinic. This is because the clinic was under renovation. All the clinics had measuring and mixing utensils to prepare ORS, including cups and spoons to administer ORS. Of the six clinics surveyed, Nalidixic acid was available with one (Ndwedwe central clinic); one other (Quadi clinic) had them available infrequently. The remaining four clinics did not have supplies. ORS packages were available in four of the clinics. Vitamin A capsules also were available in all except two. Following the health facility assessment, the Project Manager, in collaboration with the DHSMT, conducted a workshop for the clinical team and reviewed the findings of the report. Since then, attempts have been made to ensure regular supply of the essentials for all clinics. During Phase II, Asidumbini and Schipini clinics in the cost extension target area will be assessed to ensure availability of supplies.

For ensuring success of diarrhea control there is the need for a regular supply of ORS. As most mothers practice use of SSS, the availability of clean water, sugar, salt and necessary utensils are vital. Many mothers/caregivers have access to these resources. The ORS packets are supplied by the Government and therefore adequate supply is ensured even after the life of the project.

There is an adequate supply of i.v. drugs in the District. These are used for critical cases, which especially are most important, as the region is cholera endemic. The supplies will be frequently monitored for quality, to ensure that the products are usable and have not expired. An occasional constraint to the availability of supplies is due to (a) a delay in the supplies promptly reaching the facilities from the district supplies office due to shortage of vehicles at the disposal of the DOH and (b) problems with logistics management, resulting in irregular supplies. The project will facilitate a workshop for all clinics to understand the existing problems and ways to resolve them.

### **Current water supply and sanitation activities in the Project area**

Many households in Ndwedwe use municipal supplied water or stream water. These are often polluted as they are used for multiple purposes. The project will teach mothers how to collect clean water and disinfect water with chlorine prior to use. The project will not initiate any well constructions. CHCs will be linked with the Department of Water and Sanitation to tap resources for making available clean water for their communities. Most importantly, mothers/caregivers will be made aware of collecting and storing water in clean containers, besides providing "jik" (chlorine) for disinfections.

The Government of South Africa's National Cholera Strategy is being implemented in KwaZulu Natal Province. Access to safe water supply and proper sanitation in the Project area has been given high priority as about 2 million people in KwaZulu Natal are at risk and do not have appropriate sanitation. As a result, the government is taking the following actions /steps to deal with the epidemic.

- A provincial Cholera task Team comprising of all relevant role players has been established to manage the epidemic.
- Water tanks are being installed to ensure that people do not rely on river or dam water for drinking. A large number of water tanks are being erected in various communities.

- Water tankers are running on a daily basis to service the water tanks and assure access to clean water.
- Bleach is being distributed to communities to assist in water purification.
- As part of the sanitation program, toilets are being constructed.
- A plan was approved at the Ministers’/MEC meeting held on March 15, 2000 to provide 400000 households with VIP latrines at R800 per household.

The strategy is an integrated approach involving Departments of Health, Water and Sanitation, and Forestry. With the above strategies planned for, the NDCSP will not embark on water and sanitation programs, but will assist the DOH in its effective implementation, by mobilizing communities and Community Health Committees on the ground.

## **8. New, Innovative Activities or Strategies**

Community based health workers (including CHWs, TBAs, HBCVs, and traditional healers) will be trained in Household-Community IMCI. The project will seek assistance from World Vision’s project at Bergville to implement the approach. It is hoped that HH/C-IMCI will enable workers to appropriately assess the sick child, classify the illness, counsel the mother to seek treatment and assist in follow-up of care. This will be an effective strategy in reaching mothers/caregivers in even the remotest communities of Ndwedwe, and will enable them to seek early and timely care and make health care accessible to all sick children.

As per a request of the DOH, a community based monitoring tool will be developed to collect epidemiological information on child survival and maternal indicators and information on children eligible for and those immunized. These tools will be pilot tested and used by the CHWs, HBCVs, and TBAs who are trained by the project. This will result in ownership, increased community participation and decision making at the grassroots level.

## **C. PNEUMONIA CASE MANAGEMENT**

Pneumonia is estimated to be one of the three leading causes of death among black children in South Africa. Even though pneumonia is an illness that is often under-diagnosed, there were 5,874 cases among children under 5 years reported in Ndwedwe during 2001 (District Health Information System).

The project’s level of effort devoted to Pneumonia Case Management (PCM) has been reduced from 25% to 15% in Phase II. This change reflects progress made during Phase I, as well as the fact that synergies with other interventions are expected to emerge, particularly in connection with the Project’s IMCI and home based care activities.

The project’s objectives for this intervention are: 1) Twenty-five percent of mothers of children with cough and rapid or difficult breathing will seek medical attention by the end of the day after the onset of pneumonia-related symptoms; 2) IMCI protocols for pneumonia diagnosis and treatment will be implemented and correctly used in 100% of the Project clinics.

The pneumonia health communication strategy will utilize multiple channels to disseminate messages to mothers/caregivers emphasizing early detection of pneumonia symptoms and prompt

care-seeking behaviors. The project aims to improve pneumonia case management of the project area's PHC nurses in standard case management procedures, through IMCI training and refresher PCM training, using the KZN-adapted IMCI guidelines from February 2001.

These objectives reflect the fact that, while adequate and even excellent health care may be available at some South African referral centers, there is a lack of awareness in the community as to when care should be sought, and some centers are not offering adequate case management. MCDI is, therefore, including PCM among its priority interventions. Special emphasis will be placed on identification of danger signs, and correct diagnosis and treatment at the clinic level. In order to achieve synergies with the project's maternal/neonatal care intervention, and to reduce neonatal mortality due to pneumonia, postnatal visits by TBAs will extend coverage both to neonates born in health facilities and to those born at home. The beneficiaries of the PCM intervention are the 18,648 children under the age of five in the project area.

## **1. Current Status/Coverage/Prevalence**

As stated above, pneumonia is estimated to be one of the three leading causes of death among black children in South Africa. In Ndwedwe alone, there were 5,874 cases reported among children under 5 years during 2001 (District Health Information System). However, there has been no outbreak of pneumonia in the project area in the past two years.

The chance of contracting pneumonia is more common during the winter season (March-July in KwaZulu Natal). Geographic and transport problems, particularly during the rainy season, affect up to half of the Ndwedwe population. These problems are compounded by the fact that remote clinics such as Wosiyana do not have a local ambulance system. Financial constraints also create barriers to care: Project staff estimate that families need at least R10 (approximately \$1) to promptly seek and use case management services at health facilities, unfortunately, many families and caretakers in the district do not have even this small amount of money at their disposal.

## **2. Causes, Current Beliefs, Knowledge, Practices, and Care-Seeking Behavior**

In the 2001 baseline KPC survey, only 32.4% of the children who had had cough and fast breathing in the previous two weeks were given the same amount of liquids by their mothers/caregivers during the illness; none of the children were given more fluids than usual. Feeding practices were similar: only 21.2% of children who were sick received the same amount of food during their illness, with none receiving more than the usual amount to eat during the illness. Only 10% of the mothers/caregivers reported seeking treatment the same day for the illness. Although many mothers who do seek treatment go first to traditional and local healers for advice and treatments, the survey findings show that many people take their sick children to formal health sector resources as well. Of the 10% who did seek treatment by the end of the day, 22.9% sought treatment at a hospital, 62.9% at a health center, clinic, or mobile clinic, and none sought treatment from local TBA or CHW.

In addition, of the 254 mothers surveyed, 87.4% knew of at least two signs of childhood illness that indicate the need for treatment.

The progressive attitudes of the Project staff will positively influence the practices of mothers/caregivers and the DOH. Staff believe that pneumonia is a disease that requires prompt treatment and it is crucial that (a) mothers/caregivers recognize the key danger signs and take the children for treatment, (b) clinic nurses recognize the signs and symptoms and assess and treat using IMCI protocols, and (c) the adequate availability of drugs is ensured and other underlying causes are understood.

To understand ideas and beliefs and local terminology relating to childhood illnesses, the NDCSP staff carried out focus group discussions with local mothers. Participants were asked for the local terminology used to describe three conditions in a baby or small child: 1) cough with breathing difficulties, 2) breathing faster than usual, and 3) chest pulling in during inhalation. The mothers were then asked to describe the first thing a mother should do when she sees any of these conditions, and then to describe what she should do as a follow-up action if the first action is unsuccessful. The NDCSP facilitator also asked whether or not these conditions were common in the community, and whether the participants had seen these symptoms among children in their own families.

Participants in every group said that all three conditions in children are called "amahlaba" while in an adult the same condition would be called "izibobo." Sores in the chest ("zilonda"), either tubercular or non-tubercular, were also mentioned as causes of breathing difficulties in two of the groups. One group suggested that the cough with breathing difficulties could be a sign of worm infestation, and two groups suggested that asthma might cause one or more of these three conditions. The participants were also asked whether or not they had heard and could define the English term "pneumonia." All except the Wosiyana mothers said they were familiar with the term and that it refers to a type of "amahlaba" which is contracted through exposure to cold. The members of the Wosiyana group said they had heard the term but do not know what it means. "Amahlaba" was said to be quite common by all participants, and at least some in each group said they had seen it among their own children.

One of the important insights gained during these focus group discussions is that the term "amahlaba" does not precisely correspond with the medical term pneumonia. The term "amahlaba" overlaps with several other respiratory ailments recognized in western medicine and merges pneumonia with non-pneumonias. Unfortunately, this may result in attempts to treat with traditional remedies, causing a delay in seeking medical care. One of the key health education interventions of the project will be to recognize pneumonia, either as a special subtype of "amahlaba", or as an illness unrelated to "amahlaba". This will be followed by defining the illness by a set of distinct features that make it recognizable as a dangerous condition requiring immediate attention by medical personnel. Health education messages will emphasize that when the signs/symptoms of pneumonia are observed in a child, the child must be taken to the clinic immediately. The failure of mothers/caregivers to recognize and relate fast-breathing and nasal flaring as dangerous signs of pneumonia can lead to a delay in seeking care, as evidenced during the baseline KPC finding that only 10% of mothers/caregivers sought care the first day their child had cough with fast/difficult breathing.

However, many mothers/caregivers in the focus group discussions recognized severe chest-in-drawing ("Ukubaqaka") as a danger sign, which influences care-seeking behavior. As a first action most of the mothers described a home care regimen involving administration of a herbal

tea ('uhlabo" or "umtholi") or rubbing the child with the crushed leaves of an aromatic plant such as the gum tree. Members of one group said they might also give an herbal enema ("nsukumbili"), and paracetamol and cough syrup were mentioned as first actions in two other groups. Members of the Wosiyana and Oakford groups also said that a visit to the faith healer might figure among their first actions in a case of serious respiratory illness. The Wosiyana mothers also said they might pour cold water over a child with a very high fever. Application of tight bandage to the chest and use of hot compress made of millet or maize meal are also used. All groups, however, said that if no improvement were seen by the following day, they would take the child to a health facility for treatment. In fact, with clinics providing free treatment during the past few years, more children are being taken to clinics for treatment than in the past.

Preliminary review of data collected as part of the implementation of the new District Health System reveals that mothers make decisions in the household about when and from whom to seek outside care. Although it is not necessary to seek permission from other household members such as a husband or mother-in-law, informants stated that these relatives must be informed of decisions to seek outside care. Although the husband holds the responsibility to pay for health care, most mothers stated that they had sufficient resources to seek care if necessary. No gender differences were found in care seeking behaviors among caretakers.

It is difficult to estimate the relative utilization of community-based healers versus nurses, but it seems that in many cases, mothers consult local TBAs or other mothers until they decide that it is necessary or feasible to visit a clinic. However, fairly universal recourse to the formal health sector is seen in the findings of the 2001 baseline KPC survey which found that all mothers/caregivers of a child with cough and rapid/difficult breathing in the previous two weeks eventually took their child to a health facility. Of these, approximately 27% sought medical care from a hospital and 73% from a clinic.

Barriers in Ndwedwe to timely recognition, timely care seeking, and compliance with treatment include the above-mentioned disease paradigms and preferred home treatments, as well as the distance to clinics and the occasional shortages of antibiotics. As a result, project PCM activities will focus on educating mothers and caregivers about the danger signs of pneumonia-related illnesses, the importance of early and appropriate treatment, as well as counseling mothers about the importance of continuing antibiotics to its full course even if the child shows improvement. In addition, as only doctors and nurses are allowed to give prescriptions for antibiotics (which are available in only pharmacies), the project will encourage appropriate management and supply of antibiotics and other drugs with health facility staff.

### **3. DOH Policies/Strategies and/or Case Management Policies/Current Services**

The DOH follows the IMCI protocols adapted as the KwaZulu Natal IMCI Guideline for pneumonia case management, February 2001 (see Annex VIII). These protocols are consistent with and based on WHO protocols. The NDCSP is a facilitator in implementation of IMCI and the DOH protocols in the region. Professional nurses have been trained in the use of IMCI for case management whereby they (a) assess, (b) classify, (c) treat, and (d) counsel children. Included in the protocols are steps to recognize the signs that indicate the need for antibiotic treatment for infants 1 week to two months of age, and for children 2 months to 5 years of age, as well as the signs, which will result in referral to a higher level of care. Also included are the cut-

offs for fast breathing for each of the three age groups, and the antibiotics to be used for pneumonia. Counseling regarding antibiotic use and home care for children with pneumonia is done by clinic nurses when the child is brought in for diagnosis and treatment. The full protocol is provided in Annex VIII. As there is no malaria in this region, no significant effort will be expended on discussing an overlap in clinical presentations.

There are about 40 full-time professional nurses in the District who currently treat children with pneumonia in the project area. The NDCSP will work with the DOH to ensure training in and monitoring or improvement of pneumonia case management services by clinic workers, both in the public and private sector. The NDCSP collaborated with the DOH to initiate IMCI throughout the project area during Phase I, however, in the extended Phase II area, staff from two clinics have yet to be trained in IMCI.

In addition, the May 2001 IMCI National Report of South African Health Facilities Survey indicates that in KwaZulu Natal province, 79.6% of clinics had availability of 8 essential oral treatments for IMCI and 64.9% had availability of 3 injectable drugs for pre-referral IMCI treatments.

HH/C-IMCI activities have been adopted by the DOH. Through these activities, CHWs, HBCVs and TBAs will be trained to identify danger signs for pneumonia and refer children, and crèche workers will be trained in the same skills. The lessons learned from the Ndwedwe experience with HH/C-IMCI will be applied at the national level and replicated by the DOH.

During Phase I, MCDI conducted an evaluation of drug supply and logistics in collaboration with the chief pharmacist in Ndwedwe District clinics. The chief pharmacist is responsible for analyzing drug supply and logistics issues for the district, and identifying and resolving drug supply bottlenecks. In addition, he is responsible for identification of drug supply and drug management-related training needs, as well as planning and implementing training. As a result of this evaluation, a relatively regular and systematic drug supply and logistics system for the district was put in place. However, recent discussions with the IMCI nurse facilitator indicated that in many clinics there was a shortage of IMCI drugs in the previous 3 weeks. Follow up discussions with the Chief Pharmacist indicate that the continuing shortage of drugs is a result of in-appropriate logistics management. The NDCSP staff will hold a workshop with clinic staff to discuss the problems they face and develop a plan to ensure proper logistics management.

In the project area, clinic nurses have been trained in IMCI approach. In addition to providing care for pneumonia, these nurses educate mothers on the danger signs and symptoms of pneumonia. However, the Project requires regular and continuous supervision. Supervision of clinics is done in partnership by the project's Training Coordinator and the DOH Supervisory Nurse Facilitator. A checklist of facility supports will be used to monitor the quality of care; a checklist for case management of a sick child and a caretaker interview form will also be used as supervisory tools (Annex XVII) for efficient supervision.

The pneumonia case management practices of current providers in the Project area will be further explored during the training needs assessment. Incorrect diagnosis of pneumonia at the clinic level is a suspected problem. However, other than TB, respiratory infections have never been reportable diseases in South Africa; therefore it is difficult to find statistics on pneumonia

incidence for any age group. MCDI's own monitoring of data from Qadi clinic for the month of September 2001 revealed that 8 cases of pneumonia were diagnosed, 4 each in the age groups of 0-23 months and 24-60 months.

According to the May 2001 National report of the South African health facility survey in KwaZulu Natal the following findings relating to knowledge and practice were observed:

- (a) 44% of children with pneumonia were correctly treated
- (b) 56% of health workers checked the child for the presence of cough, diarrhea, and fever.

The survey also indicated that, in KwaZulu Natal, workers' ability to distinguish between the types of illness and their severity can be summed up in the following:

- (c) 47% of health workers checked the child for three danger signs (inclusive of signs of pneumonia).

Only doctors and nurses are allowed to dispense antibiotics. Therefore, the NDCSP will not provide pneumonia-related training to any other types of providers (such as CHWs) to dispense antibiotics. However they will be trained to recognize the symptoms of pneumonia and to make appropriate referrals.

While the project works at the district level, the lessons learned from the successful implementation of the DOH strategies on the ground will be used to inform policies and programs at the provincial and national level. For example, the project's experience with the HH/C-IMCI approach will provide valuable lessons for possible expansion of the approach to other areas. For more information about the NDCSP's impact on DOH policy, see the section describing **MCDI's Role in Policy and Advocacy** under **Program Approach**.

#### **4. Intervention-Specific Approach**

The NDCSP's PCM intervention targets children age 0-59 months of age and will incorporate both IMCI and HH/C-IMCI approached into its PCM intervention.

The following aspects of IMCI will be incorporated into intervention activities:

- Strengthening and expanding IMCI to the rest of the District, through its ongoing negotiations with the Provincial and Regional health officers. This includes arranging for government IMCI trainers together with the MCDI trainer to train the future DHS team and clinic staff.
- In the absence of a functioning DHS, making the administrative and logistic arrangements for getting clinic workers, venues and lodging etc. available for the IMCI training itself.
- Helping prepare the District to be capable of carrying out IMCI in terms of having continuous, regular, and adequate supply, logistics and supervision systems in place.
- Provide refresher training for the trained clinic staff.
- Together with the DOH facilitator, working to establish a regular continuous supervision of clinic staff and follow-up to ensure ideal case management practices and reduce missed opportunity.

Clinic nurses will be trained on how to counsel effectively, and then operationalize counseling in the clinical setting. The project will facilitate the DOH in implementing pneumonia case management using the KZN IMCI protocol. A health facility assessment survey report of March 9, 2001 states that all the six clinics (Wosiyana, Thafamasi, Nyuswa, Oakford, Quadi, Ndwedwe district) have been trained in use of IMCI protocols. The project will facilitate refresher training programs for these clinics as well as training of new clinic staff from the new target area (at Asidumbini and Schipini clinics) in IMCI protocols to ensure that all clinics in Ndwedwe district have a universal approach to case management.

Health care is provided by clinic nurses and doctors. The NDCSP's Training Coordinator (a professional nurse) who is trained in IMCI is a key member of the district supervisory team. The project will use IMCI training materials for training providers in standard case management. In addition, weekly visits to clinics will be conducted to supervise case management practices in place using standard monitoring tools that have been developed by the DOH which are based on the IMCI protocols and algorithms. The quality of pneumonia case management in the district will be measured using these tools.

Clinic nurses (including those at mobile clinic points) will be linked to their respective community-based workers, especially Wosiyama, Thafamasi, Nyusiyana clinics where problems with referrals have been experienced. NDCSP staff report that there are weaknesses in TBAs', CHWs', and HBCVs' understanding of the channels of the referral system. These community-based workers will be trained to determine the feasibility of the referrals, depending on the location of the nearest clinic and the client's home. A sick child, identified as very sick, is referred by a trained CHW, HBCV or TBA. It is imperative for the mother to reach a clinic in order to eventually reach the hospital. However, if it is during the rainy season, there are times when, even if they reach a clinic, travel to a referral hospital is difficult.

The referral protocols to respective hospitals will also be reiterated to clinic nurses and they will be trained to refer based on the sick child's clinical condition using IMCI protocols and algorithms. They call an ambulance and refer patients to hospital. In situations where referrals are not possible, the sick child will be treated and kept in observation. The most appropriate arrangements for transport are also made at this time. With efficient referral systems in place and plans to improve community-based structures' ability to make referrals, and provide transportation access to treatment for critically sick children will be greatly improved.

A referral follows the prescribed protocols as follows:

Childs' home → health-facility post or clinic → 2<sup>nd</sup> level referral (Osindisweni, Montebello, M.G.hospital) → tertiary hospital. All severe cases of pneumonia are referred to King Edward and Addington Hospital.

Successful treatment for pneumonia will be based on the IMCI case management approach. Two days following treatment, the mother will take the child back to the clinic for assessment. Treatment will be considered to be successful if 1) the child's fever is less, 2) the child is breathing slower, and 3) the child is eating better. Treatment failure will be defined according to DOH's definition under IMCI implementation, which will include failure to respond after five days of the recommended antibiotics. In case of treatment failure, a second line antibiotic will be tried, or a referral will be initiated. Compliance failure will be determined to assess treatment failure. A more detailed description of this protocol is included in Annex VIII.

As stated previously, retail drug sales are not practiced in the project target area. Therefore, the project will not train storekeepers to treat pneumonia using antibiotics. Efforts will be made to ensure the appropriateness of prescriptions given by health workers. First, clinic workers will be trained to ask mothers to repeat the correct dosage schedule before going to the pharmacy to obtain the antibiotics. Where the caseload is relatively low (e.g. at Wosiyane or Thafamasi clinics) workers will be encouraged to ensure that the mother gives the first dose at the clinic under observation. In addition, mothers will be encouraged to bring the medication back with them during follow-up visits so that the nurse can assess whether the correct dose is being administered. No patterns of drug resistance have been observed in the Project area.

In addition to IMCI, the Project will also pilot test and facilitate implementation of Household-Community IMCI (HH/C-IMCI) for PCM adapted to the specific needs of Ndwedwe. The NDCSP's partner CHWs, TBAs, HBCVs, and traditional healers will be trained to assess, classify and make timely and appropriate referrals to the health clinics using the community IMCI component. Specifically, they will be trained to assess the sick child, classify the illness, counsel the mother and make necessary referrals and assist in follow-up care. Children will be assessed for fast breathing by CHWs, HBCVs, TBAs and clinic workers using watches to count respirations. (Thirty of the forty trained TBAs are at least marginally literate). Clinic workers and these community-based workers already recognize chest in-drawing, as it is a condition which is recognized and taken seriously by the local culture. As the front line health workers who are responsible for care of the family and who refer sick children to health facilities, the CHWs, HBCVs, and TBAs also assist nurses during the fortnightly mobile visits to the communities.

CHCs are responsible for ensuring that the DOH initiatives are communicated to the families, as well as ensuring active participation in planning and decision making at the community level. PLA exercises will be conducted to explore the potential of mobilizing a transport system within communities to transport sick children. Even within those communities that have adequate access to medical facilities, mobile facilities will make care more universally accessible. Both CHCs and crèche workers will receive BCC training for pneumonia interventions, and will use the DOH and MCDI developed educational materials for wider dissemination to mothers and families. In addition, family members will be educated and made aware of the need to provide some money to enable caretakers to seek immediate care if necessary.

The project will also work with traditional healers to improve their knowledge on pneumonia signs and symptoms. They will also be trained in the Household-Community Based IMCI approach to understand danger signs in a sick child and make to necessary referrals.

## **5. Behavior Change Communication**

During Phase II, a greater emphasis on promotion of health education messages and maternal counseling will enable mothers to seek early medical attention and be able to recognize at least two danger signs of childhood illness.

The NDCSP will utilize a clearly defined strategy for its PCM intervention using the BEHAVE Framework, which is described under **Behavior Change Strategies** in the **Program Description** section. Although BCC activities and health education messages relating to PCM will only be finalized following additional qualitative research efforts, initial assessments and previous project experience indicate that the following activities will be useful:

- The project's PRA/quality assessment specialist will utilize qualitative research methods (including focus groups, semi-structured interviews, etc.) to examine the circumstances under which various treatment options are selected. A more in-depth understanding of the local practices, beliefs and use of local terms to define disease will be obtained to develop messages that are culturally accepted, non-threatening and enable the mothers/caregivers and community to build on their existing knowledge and to practice positive behaviors that are culturally acceptable.
- CHCs will be oriented on the signs and symptoms of pneumonia as well to enable them to be active decision makers at the community level. A continued focus on community-based channels of communication including some that are new (such as church leaders, radio messages, mobile clinics, CHWs, HBCVs, TBAs and traditional healers) will enable the project to disseminate messages about the importance of pneumonia more broadly during Phase II. The BCC program will adapt messages based on DOH and other locally used modules (e.g., World Vision's Bergville HH/C-IMCI approach). These messages will be promoted through the child to child crèche and school programs, through CHW, HBCV, and TBA health education, and through clinic worker counseling of mothers.

The effectiveness of the project's BCC activities will be evaluated through informal assessments of understanding of prevention methods and behavior change, as well as by comparing the presence of positive behaviors at baseline with the presence of positive behaviors at the final evaluation.

As described above, the NDCSP has begun to examine local vocabulary used to describe pneumonia and similar illnesses and local understandings of disease causation. The project plans to continue a more thorough examination of the community's understanding of pneumonia, including recognition of essential signs and symptoms and decision-making with respect to seeking care. This analysis will utilize qualitative research instruments, such as the Pneumonia Case Narrative Tool, the Focus Group Tool, and the Community Terms and Beliefs Tool, which were developed by Johns Hopkins University for the Malawi training session. This analysis will be supervised by MCDI's PRA/quality assessment specialist, who has undergone training in the use of these tools. The goal of this examination will be to assist the project's team, in collaboration with DOH staff, to develop a series of messages about pneumonia that 1) are specifically tailored to current levels of knowledge in the project area, 2) correct existing misinformation, and 3) utilize vocabulary that will be recognized and understood by the community.

One of the key health education interventions of the project will be to differentiate pneumonia, either as a special subtype of "amahlaba," or introduce the term "pneumonia" and define it with a set of distinct features that make it recognizable as a dangerous syndrome, which requires immediate attention by medical personnel. Health education messages will emphasize that a child must be taken to the clinic immediately when this syndrome is seen.

MCDI's BCC education program relating to pneumonia will therefore focus on (a) increasing mothers'/caregivers' recognition of the signs and symptoms of pneumonia, especially rapid

breathing as an early symptom, and (b) increasing the likelihood that mothers/caregivers of children with cough or difficult breathing will seek medical attention by the end of the day after the onset of symptoms. The 2001 baseline survey indicated that while all mothers/caregivers of children with cough and rapid/difficult breathing sought care outside the home for the child's illness, none did so by the end of the day after the onset of symptoms. Only 40% did so the next day, and 30% took 3 or more days to take their child to a health facility. NDCSP staff will collaborate with DOH personnel to develop messages that familiarize mothers with rapid or difficult breathing, chest in-drawing and key general IMCI danger signs such as inability to drink, or poor feeding, abnormal sleepiness, as indicators that immediate treatment is required.

MCDI is now discussing with NPPHCN and a local non-profit public interest media organization, the possibility of using cassettes of radio programs they have developed and recorded as part of public education sessions on early recognition of signs and symptoms of pneumonia, and the need to seek medical attention by the end of the day for the child with cough or fast breathing. These messages will be transmitted through sources discussed above, including crèche operators, and project-trained CHWs, HBCVs, TBAs, and traditional healers. MCDI will work with its collaborating partners DOH, and local NGOs such as TREE, to develop their planned health education programs for community mothers and caregivers, and crèche child to child activities. CHCs will also mobilize communities for adopting positive behaviors. As key decision making bodies in the community, CHCs will assess the effectiveness of messages. Focus group discussions and individual interviews with CHWs, HBCVs, TBAs, traditional healers, CHCs, and mothers will allow the project to get an idea of the impact of the messages on caregiver practices, and to make adjustments. The final KPC survey will measure several key knowledge and behavior changes. The mobile clinics will be used as a strategy for educating mothers/caregivers on the signs and critical symptoms of pneumonia using video as a media. The project's school-based child-to-child health communications program, which will be facilitated in collaboration with the school health nurses and selected schoolteachers, will familiarize older children and teenagers with rapid and difficult breathing as a symptom requiring care in their younger relatives and neighbors. MCDI will work with the existing nurses in Ndwedwe area clinics to carry out counseling sessions on pneumonia recognition with mothers awaiting treatment at the clinic.

## **6. Quality Assurance**

The NDCSP's approach to improving standards of care is through its support of the introduction of IMCI protocols and procedures to Project area clinics and hospitals. As noted above, the provincial DOH included Ndwedwe among its IMCI "test" districts at the suggestion of MCDI. During Phase I, therefore, at least one nurse at each facility (and in some facilities, 2 or 3 nurses) who treats children was trained in IMCI, and the protocol was at least partially implemented in all clinics. Implementation problems have been identified however, to include poor supervision, intermittent shortages of antibiotics in the northern clinics, and resistance to the new protocol by both communities and, in some cases, clinic staff.

During Phase II, the Project will introduce IMCI to the facilities in the extended project area and, in Phase I facilities, concentrate on improving the quality of implementation through refresher training and supervision activities. Key activities will include the training of a cadre of IMCI supervisors (WHO training materials to be used have been adapted for KZN by the DOH/HRD office), ensuring that a "critical mass" of personnel are trained in all facilities, monitoring the

progress of IMCI implementation on a quarterly basis and facilitating (through the CHCs) a series of public meetings to explore the reasons for community resistance to IMCI and to explain the IMCI protocol to community members. In addition, MCDI plans to address the reported drug shortage problem by implementing a pharmaceutical stock management-training workshop for personnel from all clinics. The provincial pharmacist will be asked to participate in the workshop and to assist with follow-up problem identification and resolution. The NDCSP will also promote community understanding and acceptance of IMCI through its work with CHCs. During supervisory visits, clinic nurses have complained that patients do not understand why, under the new protocol, they are sometimes sent home without receiving any medication. Rumors have accused these (IMCI trained) nurses of stealing the medicines for themselves, or of simply being “stingy,” and some patients have refused to be treated by these staff members after once being refused medication. The NDCSP will utilize the CHCs as a conduit to familiarize the communities with the IMCI protocol and to correct misunderstandings.

In addition, Ndwedwe’s community-based worker partners, including CHWs, HBCVs, and TBAs will be trained using lessons learned from HH/C-IMCI experience of World Vision’s Bergville project.

The project will monitor quality of care for pneumonia and its other key interventions utilizing IMCI check lists, including a checklist of facility supports, an assessment of case management, and a caretaker interview (see Annex XVII), which are currently being used by the DOH. More frequent, systemic supervision of clinic staff, including more interactive technical assessment and problem-solving, will also ensure that good assessment, classification and treatment practices learned during IMCI training continue to be applied well after the training. The Project will monitor and improve the quality of counseling as part of the facility self-assessment, ongoing monitoring and IMCI training.

The project collects information using an outpatient cases form and referral form (Annex XI) to estimate the number of pneumonia cases reported at outpatient clinics and referred to hospitals. These forms are used monthly and help to estimate accurate reporting of pneumonia and other diseases at the community level. As per the request of the DOH, a community based monitoring tool will be developed to collect epidemiological information on child survival and maternal indicators, including information on children with cough and rapid breathing. These tools will be pilot tested and used by the CHWs, HBCVs, and TBAs who are trained by the project. This will result in ownership, increased community participation and decision making at the grassroots level.

The community-based tool described above will ensure that all children in the community are tracked by community based health workers and mothers are counseled on treatment, and, if necessary, appropriate referrals are made. The IMCI checklists discussed above (and included in Annex XVII) will help in improving the quality of IMCI practices at the clinic level. Discussions with the IMCI nurse facilitator have indicated that there is shortage of IMCI drugs. Therefore, the project will organize a workshop on logistics management and ensure that the clinics have a regular and uninterrupted supply of drugs.

## **7. Availability of Drugs/Supplies**

Successful implementation of the IMCI approach to pneumonia case management requires that clinics have access to amoxicillin and ceftriaxone drugs. MCDI's health facility assessment conducted in March 2001 indicated that of the six clinics surveyed only one had supply of ceftriaxone. Of the two hospitals surveyed (Montebello and Osindisweni), only one had ceftriaxone. Cotrimoxazole was available in 5 of the 61 clinics. Discussions with the IMCI nurse facilitator have indicated that a shortage of IMCI drugs is a problem. However, these shortages are considered to occur as a result of poor logistics management and so the NDCSP will organize a workshop on logistics management to ensure that the clinics have a regular and uninterrupted supply of drugs.

## **8. New, Innovative Activities or Strategies**

The Project's innovative IMCI strategies relating to HH/C-IMCI and community based monitoring are described under the **New and Innovative Activities or Strategies** section of the **Control of Diarrheal Disease** intervention.

## **D. IMMUNIZATION**

The results of the baseline KPC survey showed that the completed immunization coverage rate for children 12-23 months of age in the district was 51%. Therefore, immunization will continue to be a critical project intervention under Phase II and strategies will focus on encouraging mothers and caregivers to fully immunize the young children under their care. However, the project's level of effort for immunization under Phase II will be 20%, down from 25% during Phase I, in order to enable the project to expand its HIV/AIDS/STI related activities.

The project's immunization objectives are: 1) Seventy percent of children aged 12-23 months are fully immunized per RTH card; 2) Eighty percent of children aged 12-23 months will have received a measles vaccination per RTH card. Measles vaccination has also been selected as a critical objective due to the reported cases of measles in the district, the low measles immunization rate according to the baseline KPC, and because it serves as an indicator of coverage.

Key project activities will include training and development of clinic-based nurses and dissemination of health messages through CHWs, traditional healers, TBAs, schools, local crèches and clinics to respond to specific problems identified by the KPC survey, such as a lack of familiarity with recommended schedules of immunization. For example, only 11% of mothers and caregivers surveyed during the KPC knew that measles should be given between 9 and 12 months of age.

Despite the resources available to the area under the new National Health System (for example, the 2000 public health expenditure for KwaZulu-Natal Province was R786 (~US\$77) per capita, compared to R418 (~US\$41) per capita spent during 1997-1998), the Ndwedwe District faces a number of constraints in attempting to institute a democratic and egalitarian organization of services, including adequate immunization coverage. First, the presence of endemic political violence (as well as economically motivated violence) has characterized the area for many years and limits the mobility of both service providers and their clients, particularly at night. Second, as

is true in many districts in the province, Ndwedwe has been and continues to be without a fully functional district-level health system. Instead, it is served by a fragmented mosaic of service providers who are supplied and supervised by numerous different institutions, until the unified District Health System, under development since December 2000, is finalized.

## 1. Current Status/Coverage/Prevalence

The baseline KPC survey found that only 69% of the mothers and caregivers of children 12-23 months could present an immunization (“Road to Health”) card, and of those, only 51% of the children were fully immunized. The coverage rates for children 12-23 months with RTH cards were as follows:

BCG	95.3%
OPV1	93.0%
OPV3	79.0%
DPT1	81.4%
DPT3	83.7%
Measles	60.4%
Fully Immunized	51.0%

The KPC survey did not report maternal tetanus toxoid (TT) coverage since mothers reported that the Maternal Health Cards are held at the facilities rather than by them. TT vaccinations are provided to mothers when they visit a health facility for antenatal care. However, only 9% of the mothers in the survey responded that they had at least three antenatal visits and only 20% responded that they made an antenatal visit and at least three visits thereafter during their last pregnancy. According to the Department of Health, there were no cases of tetanus in KwaZulu Natal between 1998-2000 (Directorate: Health Systems Research and Epidemiology Notification System, Pretoria, 2000). National DOH data also shows a high percentage of pregnant women in the province (75%) receiving tetanus toxoid immunizations. Ndwedwe District health statistics show that no cases have been reported in clinics since 1997. As a result, the project will not include reduction of tetanus toxoid as a results-based objective; however the project will continue to place an emphasis on TT immunizations among pregnant women through its maternal and newborn care activities. In addition, the project will sample maternal cards from the project clinic areas to estimate the coverage as a baseline to estimate the TT coverage.

Measles, tuberculosis, polio, and whooping cough are among the reportable diseases tracked by the national DOH. Hepatitis B has also recently been added to the antigen series. In KwaZulu Natal province in 1998, there were 1.6 cases of measles reported per 100,000 and 110 reported cases of tuberculosis per 100,000 (Department of Health Directorate: Health Systems Research and Epidemiology Notification System, Pretoria). The national DOH also reported that 50% of children in the province were immunized in 1998.<sup>12</sup> According to the District Health Information System (DHIS), there were 10 cases of reported measles in Ndwedwe in 2001 and no cases of the other reported medical conditions in 2000 and 2001. However, reporting is generally thought to be incomplete and inaccurate. It is hoped that when the communicable disease control system becomes fully functional this year, the problem of under reporting will be resolved.

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<sup>12</sup> “Immunization” was defined by the national DOH as the percentage of children aged 12 to 23 months who had received BCG, 3 doses of DTP and polio, and measles vaccine.

According to the 2000 National Primary Health Care Facility Survey, 85% of facilities, 100% of satellite clinics, and 100% of mobile units in the province offer EPI as a daily service. However, while mobile units do visit remote and inaccessible areas of the District, visits are infrequent and not all areas in need are covered by a mobile service. More information on the problems families have accessing health care in Ndwedwe have been described under the **Major Opportunities and Constraints to Maternal and Child Health in the Sub-District** section of the **Program Site Analysis**.

## **2. Causes, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior**

Several cultural, behavioral, and educational factors lead to barriers in achieving higher measles coverage and full immunization coverage in the project area. For example, caregivers of infants whose mothers work outside the home are often not instructed to take the child to a health facility for immunization. In addition, it is assumed that children who participate in immunization campaigns do not need to be taken subsequently for additional immunizations. Further, a large number of children who have not been immunized are borne to girls who attend school and leave their child in the care of their busy parents. Many of these children are born at home because young mothers often fear the disapproval of health facility nurses. Thus, the opportunity to educate these young mothers during the perinatal period about the importance of immunization is often missed.

Care seeking behavior is influenced to a large extent by the nature of the family. In extended families, grandparents still play a pivotal role in the decision-making and care of child. In nuclear families, most mothers are the primary caretaker, since many fathers work away from home. Most mothers seek the advice of traditional/faith healers before resorting to Western medicine. Decision to take children to a health facility is often based on the distance from the village. In most cases, the first point of contact is the CHW, who advises and makes referrals to a health facility, when necessary. The first stage facility is a local clinic managed by nurses trained in IMCI. In some instances, mothers go to mobile clinics. In addition, a good number of mothers prefer to go to private practitioners, whose practices are not standardized.

Traditional Zulu families have an explanation and an intervention for every child ailment including measles, identified as “isimungumungwana”. Measles is recognized as a severe illness and requires an immediate decision on seeking treatment. Although measles is widely recognized as contagious, few families believe that immunization is an important prophylactic. They believe that this disease is imminent to every child, even if the child is immunized.

In general, many mothers and caregivers in the project area do not seem to know or value the importance of early and complete vaccination, and therefore do not actively seek immunization. The project proposes to conduct a qualitative research/ PLA exercise in the month of August 2002 to provide more in-depth understanding of the current knowledge, beliefs, and practices of mothers and families regarding immunization.

Clinics and outreach facilities in Ndwedwe have changed their policy from a designated single day each week for vaccinations to a policy of “opportunity based immunization” to enhance the coverage and reduce missed opportunities. In general, missed immunizations are made up at the

next visit, but no clinic-based system allows for verifying immunization status if a child presents himself without a card. Unfortunately, virtually no follow-up of defaulters or case follow-up is done. The absence of appropriate follow-up with mothers, the lack of clear communication and the lack of good counseling skills fail to build trust and community participation. For example, a certain level of distrust of vaccines is reportedly due to the fact that mothers whose children have had adverse reactions have not always received sufficient counseling.

Fortunately, project staff has a positive attitude towards immunization programs. They perceive immunization as one of the most important child survival interventions, especially since Ndwedwe is in the epicenter of the AIDS epidemic, and recognize that immunization helps to maintain the immune system of the child. They support the notion that intense dissemination of key health education messages is critical. These messages should be built on the already existing belief amongst the black people of South Africa that disease can be prevented through prophylactic treatment.

Project staff also feels that IMCI should be effectively implemented so that the clinic nurses appreciate immunization services. This is particularly important, as “ukugoma,” the Zulu version of immunization, involves giving traditional concoctions to prevent evil spirits or disease. For example, an enema “ukuchatha” is a universal, multipurpose treatment for a wide variety of illnesses. Application of a special soil from an ant heap to treat a rash, either mild or severe, is referred to as “ukuqubuka.” The decision to take the child to a health facility will be determined by the severity of the rash. “Ukushisa” refers to fever, which may or may not warrant seeking care. Although these could be considered to be indications of measles, more research is needed to gain an understanding of how to differentiate these symptoms from a measles infection.

No significant gender differences for seeking immunization services and care seeking behaviors were identified, as also evidenced by the KPC survey. However, according to project staff, many Zulu men think it is a weakness to regard illness as a serious sign, and might thus take longer time in seeking care.

In addition, to the knowledge and behavioral factors listed above, weak monitoring and follow-up mechanisms for controlling and containing outbreaks of EPI-preventable diseases create additional problems for ensuring coverage. Recent efforts, including an EPI surveillance workshop co-sponsored by the NDCSP and the DOH, have begun to address these problems. The NDCSP will continue to assess the impact of the training on improving surveillance and case follow-up.

### **3. DOH Policies/Strategies and/or Case Management Policies/Current Services**

Prior to 1995, immunization policy in South Africa was inconsistent due to the fragmented health system. The current routine childhood immunization schedule in South Africa is based on a National Policy that was adopted in 1999 and, although it includes Hib and HBV, it is otherwise consistent with WHO guidelines.

The 1999 directives included, for the first time, a clear immunization schedule with parallel timing for the DPT and OPV series. It is as follows:

## SOUTH AFRICA'S ROUTINE CHILDHOOD IMMUNISATION SCHEDULE

AGE OF CHILD	WHICH VACCINE?	HOW AND WHERE IT IS GIVEN?
At birth	BCG, Polio	Vaccination in right upper arm Drops by mouth
6 weeks old	Polio, DTP, Hib, HBV	Drops by mouth Injection in left thigh Injection in left thigh Injection in right thigh
10 weeks old	Polio, DTP, Hib, HBV	Drops by mouth Injection in left thigh Injection in left thigh Injection in right thigh
14 weeks old	Polio vaccine DTP vaccine Hib vaccine HBV	Drops by mouth Injection in left thigh Injection in left thigh Injection in right thigh
9 months old	Measles vaccine	Injection in right thigh
18 months old	Polio vaccine DTP vaccine Measles vaccine	Drops in mouth Injection in left upper arm Injection in right upper arm
5 years old	Polio vaccine DT vaccine	Drops by mouth Injection in left upper arm
BCG: Bacillus Calmette Guerin vaccine against tuberculosis DTP: vaccine against diphtheria, tetanus and pertussis Hib: vaccine against <i>Haemophilus influenzae type b</i> HBV: vaccine against hepatitis B DT: vaccine against diphtheria and tetanus		

Note: The national EPI schedule does not include yellow fever, since it is not endemic here.

Five visits are required to reach full coverage for children by 12 months of age. Two more visits are recommended for boosters, but this is a lower priority until full coverage of children under 12 months is achieved for most children.

The new system includes a directive to DOH facilities to make immunizations available during all clinic hours. The current immunization services in the project area are available from fixed sites daily on demand, but it is usually only once a week, year round. Mobile facilities from hospitals and the Ndwedwe Community Health Center make periodic visits to remote areas. The overall quality of existing immunization services is good, according to NDCSP staff observations, discussions with supervisory personnel at the Ndwedwe Community Health Center, and visits to hospitals. The understanding of the EPI schedule, supplies of vaccines, cold chain maintenance, injection technique, disposal of used needles and syringes all seem adequate. Stock-

outs and adverse incidents are reportedly rare and clinic supplies of disposable syringes assist in maintaining good sterile conditions. However, there is the impression that communication with clients is taken for granted. On discussion with project field staff, it is perceived that clinic nurses, who administer immunization services, do not communicate key messages clearly/or are not understood adequate enough by mothers/families, for example, when advising on possible adverse reactions to vaccines, appropriate dates for follow-up, etc.

The DOH's EPI strategy is to eradicate polio and eliminate measles through a series of strategies including mass campaigns and routine vaccinations. The NDCSP will support this initiative in Ndwedwe District while emphasizing the preference for routine immunization. In addition, the NDCSP will assist the District in surveillance of AFP by training and supporting the active involvement of CHWs and HBCVs.

While the project works at the district level, the lessons learned from the successful implementation of the DOH strategies on the ground will be used to inform policies and programs at the provincial and national level. For example, the project's experience with the HH/C-IMCI approach will provide valuable lessons for possible expansion of the approach to other areas. For more information about the NDCSP's impact on DOH policy, see the section describing **MCDI's Role in Policy and Advocacy** under **Program Approach**.

#### **4. Intervention-Specific Approach**

Significant improvements were made in immunization coverage in Ndwedwe during Phase I of the project. The 2001 KPC results suggest that, for children under the age of two years, the percentage of those fully immunized has increased since the original DIP, while drop-out rates have decreased substantially. The NDCSP is therefore lowering its immunization LOE in order to expend a greater proportion of resources on the HIV/AIDS epidemic during Phase II of the project.

However, the project will continue to facilitate activities at the community, individual/family, clinic and district levels to increase immunization coverage. The NDCSP is playing an important role in providing community education to create demand for immunization services for women and children. The NDCSP is assisting the DOH, in particular the DHSMT, in the design and establishment of Community Health Committees (CHCs), whose role includes community mobilization. Trained CHCs will be responsible for decentralized decision making, and will form the basis for communication with health facilities to voice the community's needs and issues related to immunization; e.g., access to services for high risk populations and underserved areas. CHCs will be trained to empower them in providing critical health education messages as well as management practices. Monthly meetings will be conducted where issues regarding services will be discussed. Trained CHWs, who form the core of the health team at the grassroots level, will conduct health education at the community level. Further, discussions between the Project Manager, the Ndwedwe District Manager, and a community-based group working to start a radio station have reinforced the potential of using periodic radio campaigns to increase immunization rates.

Individuals/families will be informed about immunization services through community meetings, and CHWs and HBCVs will also carry out necessary follow-up at the household level with

mothers and caretakers of children age 0-23 months of age. In addition, the TBAs trained by NDCSP staff will play a role in persuading women to go for prenatal care and TT immunizations, as well as to take their newborns for regular immunizations. (A more detailed description of the NDCSP's role in providing education through TBA training is found in the Maternal/Newborn Care intervention section.) Traditional healers will also play a key role in bringing positive changes in the behaviors of mothers/caregivers. MCDI is currently carrying out research funded by Margaret Sanger Centre South Africa International to provide a better understanding of the potential role of traditional healers in improving the health of women and children in Ndwedwe, and, particularly, the potential areas for collaboration with the biomedical health system.

At the clinic level, nurses provide vaccinations against all immunizable diseases and carry out health education using flip charts developed by the Ndwedwe District health authorities in collaboration with the European Union. The NDCSP partners with the DOH to train clinic staff in improving the immunization program, including education, administration, monitoring and quality improvement. NDCSP staff worked in collaboration with the other members of the District Health System Management Team (DHSMT) to design the EPI training for Ndwedwe District health staff.

While clinic nurses have already received training on the new immunization schedule, continued refresher training by project staff is needed, to include stock control, changes in recommended injection sites, use of objective-setting, proper disposal of needles and syringes, etc. An EPI cold chain assessment carried out recently by project staff with the DOH's EPI staff confirmed that this is indeed needed. The NDCSP's training program will address these issues and, since the KPC survey suggested that many children are visiting the clinic without being brought up to date on immunizations, the NDCSP and DOH-sponsored training will focus on decreasing missed opportunities in the clinics, particularly with the initiation of IMCI. The refresher training will utilize training curriculums developed by DOH (e.g., the EPI disease surveillance Field Guide), which include information on detecting, reporting, investigating and responding to EPI priority diseases. The immunization activities are coordinated with the IMCI approach. When a child comes for immunization, the staff uses the Road to Health Card for monitoring, and all sick children are monitored for immunization status using the IMCI algorithms.

In addition, on designated days, the NDCSP will support the DOH to organize mobile outreach sessions through the community mobilization activities of TBA's, CHWS, CHCs, and traditional healers. These outreach sessions will be a key strategy to increase access to services within the community.

The DOH targets pregnant women for TT vaccinations and the NDCSP supports this through the training of TBAs to promote antenatal care and TT immunizations specifically. The project's EPI training will emphasize limiting missed opportunities for increasing TT coverage. In addition, the project will translate EPI and IEC materials into Zulu and produce a set of materials such as flip charts, and counseling cards, which will increase mothers' awareness of the importance of TT and other immunizations.

There are no obvious "high risk" populations in Ndwedwe, other than those who live the farthest from the clinics, especially in the new areas. Asidumbini and Schipini clinics are the most distant and the project has yet to establish a relationship with them and assess the access to services

there. The focus on training TBAs for these more remote areas will help encourage the high-risk populations to come in for vaccination. In addition, through training the TBAs in safe delivery techniques, an additional measure of prevention will be provided to women who do not receive adequate TT coverage before delivery.

A three-day TBA training is proposed for the new extended area for June 2002. During the EPI training module, TBAs are trained in techniques to protect themselves from exposure to blood-borne infections, including use of single-use needles and syringes, which are provided by the government, and in the proper disposal of sharp materials. Gloves are also provided to clinic workers; however, there seems to be a shortage of gloves in some clinics.

The DOH disposal plan for needles and syringes involves the use of sharps containers and subsequent incineration of these products. However, when the project manager did an EPI assessment with the DOH staff member responsible for EPI, it was found that one of three clinics visited did not have a sharps container. The staff reported that it was because the Polyclinic, which provides EPI supplies to the clinic in question, did not have the proper containers. Other facilities seem to use proper sharps disposal and incineration techniques. As part of the EPI training, the NDCSP will ensure that proper disposal containers are made available to all clinics.

## **5. Behavior Change Communication**

The NDCSP will utilize a clearly defined BCC strategy for its immunization intervention using the BEHAVE Framework, which is described under **Behavior Change Strategies** in the **Program Description** section. Although BCC activities and health education messages relating to immunization will only be finalized following additional qualitative research efforts, initial assessments and previous project experience indicate that the following activities will be useful:

The results of the 2001 KPC suggest that Phase I was successful in reducing DPT and OPV dropout rates significantly. Full immunization coverage, however, has been more difficult to achieve, in part because measles immunization rates (as documented by RTH Cards) are lagging, and in part because children without cards are counted as not immunized for survey/statistical purposes. In addition, the KPC survey documented low awareness of mothers/caregivers; 74.7% stated that they did not know when a child should be immunized for measles and only 11.1% could correctly state that measles vaccination should be given at nine months of age.

MCDI's strategy for attacking the problem of low coverage is inclusive of the following mechanisms. The main behavior change objectives will be four fold: (1) to increase mothers' immunization-seeking behavior, especially in the completion of the measles and full immunization series; (2) to improve provider skills and attitudes, to improve client-provider relationship, and to change the clinic staff's attitude from a once-a-week approach to a no-missed-opportunities approach; (3) to increase sense of community and shared responsibility, increase access and improve distribution of resources; (4) to improve knowledge and involvement of traditional healers in providing accurate key messages.

Community Health Committees will take responsibility for reminding mothers in their communities to retain their child's RTH Card and for checking that immunizations are up to date. In addition, in collaboration with our local partner TREE, crèches will also insist that RTH Cards

be presented, the immunization status of children in the crèches will be checked, and mothers will be counseled on the importance of full immunization. The NDCSP will also support related BCC campaigns organized by church groups, and will train CHWs, HBCVS, CHCs and clinic nurses to include messages persuading mothers to initiate immunizations promptly, to complete the series and to make sure they know when subsequent immunizations are due.

The Project will incorporate information regarding local beliefs, practices, local vocabulary for messages related to measles illness recognition, e.g. "Isimungumyingwana," and care seeking into counseling cards and other audiovisuals. These different forms of media will be used to educate mothers at the household/community level and to mobilize CHCs and traditional healers.

As stated above, the baseline KPC provides information on the low level of measles and full immunization coverage. Major factors that influence this behavior are the perceived lack of importance within the community for immunizations, poor client-provider communication, poor community ownership and responsibility, and decreased access to services, especially for high-risk populations. Formative/qualitative research will be undertaken to develop a broader understanding of these factors, which will inform the key messages to be communicated in Ndwedwe. The target audience will be mothers/caregivers with children age 0-23 months.

Through a variety of channels, including TBAs, THs, CHWs, clinic health education, crèche and school sensibilization, mothers/caregivers/household decision-makers in the community will receive health education messages familiarizing them with recommended immunization schedules and with the importance of vaccination protection for older children as well as newborns. BCC methods will be used to ensure that these messages will be put into practice. Community health committees will also be informed on the recommended vaccination schedules and key practices, so that they participate in community mobilization efforts, in active decision-making and promote critical thinking. Facility nurses will be trained on improving client counseling skills and attitudes. They will also be informed on the importance of understanding community perceptions and behavior to impart good communication and counseling.

Mothers will be educated by TBAs, CHWs, and HBCVs on the importance of maintaining RTH cards. They will also be trained to share information, including the immunization schedule, with other "grandmothers" at "Pension Day" gatherings and church gatherings, which many have begun to do already.

Most mothers/caregivers seek advice from traditional/faith healers. It is for this reason that traditional healers will be targeted as well. They need to know that "ukugoma" is equally applicable to measles, polio, etc; and therefore, requires participation in imparting right messages.

Findings from the formative research will help in developing the critical health messages and training materials used by the project staff. Once materials have been developed, they will be pre-tested with mothers and clinic staff to ensure their appropriateness, clarity and utility.

Furthermore, MCDI will also use these integrated packages at the crèches to educate mothers/caregivers and crèche operators. NDCSP estimates that about one third to one half of preschool children attend a crèche. So in addition to basic messages conveyed through child-to-

child health education with the older children, the crèche operators will also share educational messages through the crèche attendees' parents, by enforcing compliance with immunization requirements for crèche admission.

Crèches will be linked with clinic staff to increase immunization rates through periodic on-site vaccination, crèches and schools will also be strongly encouraged to enforce existing policies, which require appropriate immunizations before a child's admission.

A child-to-child EPI and IEC approach will be developed for the school nurses to use with primary school children. These students often participate in the care of younger siblings, nieces and nephews, and they are old enough to have some influence on the primary caregivers of these children.

As stated previously, BCC activities will focus on increasing caretaker knowledge of the importance of complete immunizations for children and getting mothers to take an active role in going for vaccinations on "immunization days," or if "immunization on demand" is available, getting mothers to actively ask health workers to check the child's immunization status during clinic visits. The activities also will focus on the requirements for vaccination for crèche and school entry, and the purpose for these requirements.

The facility nurses will be trained in counseling skills and improving attitudes towards clients. They will be oriented to the clients' perspectives and beliefs, which are essential in narrowing barriers of communication, so that they can have an impact on care seeking practices. The trainings will be conducted using a ten-day HIV/AIDS Counselor training course, developed by the DOH and Centers for Disease Control (CDC), which deals with general client counseling.

Each behavior change communication effort will be monitored, using exit interviews, to assess for quality and its impact on caretakers knowledge and practices.

The key health education messages the Project plans to disseminate to promote immunization are those recommended by the EPI policy of the National Maternal, Child, and Women's Health program. These messages include that there are seven important diseases against which immunization can protect children, five visits are necessary to finish the immunization series and to be fully protected, and that vaccination is safe for children even when they are sick. However, the messages chosen for health education relating to immunization will only be finalized following qualitative research activities conducted using the BEHAVE Framework, described under the **Program Approach's Behavior Change Strategy** section.

## **6. Quality Assurance**

The NDCSP's approach to improving access and quality of care complements its support to the introduction of IMCI to the District. The problem of missed opportunities that characterized the District at the outset of the project due to weekly "immunization days" is being addressed through the re-organization of clinic services according to the KZN-IMCI protocol (February 2001). DOH/HRD staff will use this model to carry out all IMCI training. Although this effort began in Phase I, resistance has been encountered at the larger clinics where a smaller proportion of the staff has been trained in IMCI. In Phase II, a "critical mass" of IMCI-trained workers will

be established at all clinics. Supervision will be improved through planned IMCI supervisory training, the development of supervisory protocols, and the rationalization of the transport system for the District. Equipment failure (unserviceable refrigerators, etc.) has been identified as rare.

In addition the following checklists (provided in Annex XVIII) will be used by project staff in collaboration with DOH designated personnel to ensure quality:

- (a) immunization data surveillance and health promotion,
- (b) clinical practices, management, training and integrated child health,
- (b) cold chain and immunization operation management,
- (d) cold chain temperature monitoring chart,
- (e) an exit interview to understand mothers/caregivers perceptions of service.

Immunizations given during mass campaigns are currently not recorded on Road to Health (RTH) cards. In addition, women's TT vaccinations are recorded on maternal health cards, which are kept at the clinic after the birth. The Project will try to minimize card loss by encouraging mothers to maintain RTH cards carefully and to bring them at the time of each visit to the clinic for any reason. Because the cards are provided at no cost, if a card is lost, a new one will be provided. (The card supply is very reliable.) If the person has received vaccines previously, an attempt will be made to reconstruct the immunization history by questioning the mothers, but some re-vaccinating will probably have to occur. Tying the importance of cards to issuance of birth certificates and school admissions will be explored as possible motivational methods for mothers/caretakers to safeguard their cards.

### **Dropouts and Missed Opportunities**

According to the National Health Care Survey of 2000, 85% of the facilities in KwaZulu Natal offered immunization services on a daily basis. This figure was 73.7% for South Africa. However, based on the KPC survey and interviews with clinic staff, MCDI concludes that full coverage is low in the project area because mothers fail to visit the clinic specifically for the purpose of securing the second and third vaccinations in a series and because clinic nurses do not take advantage of "missed opportunities" during visits made for other purposes.

The project will carry out more in-depth, focus group interviews and other qualitative research inquiries in the community to specifically identify the barriers to achieving better coverage for childhood immunizations. The project will also facilitate increased access to immunization services by helping crèches arrange periodic on-site vaccination days and in the clinics through increase availability of vaccination, more efficient service provision, and through correcting misinformation about contraindications for immunization of children.

## **7. Availability of Drugs/Supply**

In South Africa, the government purchases and provides all vaccines through the DOH. Both the 2001 KwaZulu Natal Department of Health EPI policy document and the 1997 Department of Health EPI plan for South Africa "Cold Chain and Immunization Operations Manual" describe the cold chain in great detail, as well as the means of monitoring vaccine quality and ensuring vaccine supply. Vaccine quality is monitored at clinic level through expiration date checks,

charting of twice-daily temperature checks of the vaccine refrigerator, and heat-sensitive color changing monitoring stickers kept on or with the vials.

As stated above, equipment failure (unserviceable refrigerators, etc.) has been identified as rare. The 2000 National Family Health Care Facilities Survey report states that the availability of a working refrigerator is 97.5% in KwaZulu Natal, compared to as 92% nationally. Uninterrupted electricity supply is 87% in KwaZulu Natal and 69% nationally.

A visit to the CHC in Ndwedwe and observations of the cold chain showed excellent systems in place, with solid ice and temperature monitoring systems. However, the cold chain in Ndwedwe District has not been studied in depth. The remote clinics without electricity, Wosiyana and Thafamasi, have solar-powered Minus 40 refrigerators with a battery storage capacity that the nurses report as adequate.

However, the DOH lists stock control and maintenance of refrigerator temperature charts among the training needs of the province and therefore MCDI will include these needs in its training program. MCDI in collaboration with the DOH is planning a cold chain survey using the above monitoring tools.

The NDCSP will not provide vaccine supplies. However, the project will improve supply flow, supply management, cold chain maintenance and monitoring through training of health workers. This training, which addresses these and other EPI issues, will include solutions for malfunctions in cold chain equipment. No equipment will be purchased by the project to monitor and maintain the cold chain.

## **Vitamin A**

A study carried out in 1995 by the South African Vitamin A Consulting Group stated that, nation-wide, one of every three children was at least borderline vitamin A deficient. The KZN IMCI guidelines (February 2001) provide information on vitamin A prophylactic and treatment doses. For the moment, vitamin A supplementation is associated with growth monitoring and immunization visits, but this draft policy is not being implemented in Ndwedwe clinics. It is believed that vitamin A deficiency is not a problem in Ndwedwe, given the local diet, which contains many vitamin A-rich foods as reported by the mothers during the baseline survey.

## **Involvement in Polio Eradication Efforts**

The NDCSP will assist the DHS in organizing and training for polio and measles campaigns as they are instituted, but will place its primary emphasis on helping the DHS strengthen the routine immunization system. The NDCSP will play a particularly important role in community level mobilization for campaigns through the trained TBAs, traditional healers and CHCs with whom the NDCSP will be working, as requested by the DOH.

## **Surveillance**

A 2000 national clinic survey stated that in Kwazulu Natal Province overall, 87.5% of clinics surveyed reported that they had telephone communication. This serves as useful communication

mode in disease surveillance and reporting of data. The MIS, instituted by MCDI, also collects monthly figures for EPI diseases, including AFP, and the DHS system will achieve the same once it is instituted.

<b>Case Definitions for EPI-SA Reportable Diseases</b>
1. Acute Flaccid Paralysis: Any case of acute flaccid paralysis, including Guillain-Barre Syndrome, in a child less than 15 years of age for which no other cause is apparent, or a patient of any age diagnosed as polio by a medical officer.
2. Neonatal Tetanus A history of normal sucking and crying for the first two days of life, AND history of onset of illness between 3 and 28 days of age, AND history of inability to suck followed by stiffness and/or convulsions AND often death.
3. Suspected Measles Case: Fever AND maculopapular (“blotchy”) rash AND cough OR coryza (“runny nose”) OR conjunctivitis.

The general procedure for surveillance begins with the identification of a case matching the case definition of one of the diseases listed above by the diagnosing caregiver at a clinic or hospital. A case investigation report form is sent to relevant officials at the Provincial DOH communicable diseases unit and a copy is sent to the district level official responsible for case investigation and follow-up at the district level. In the case of Ndwedwe District, this is the Environmental Health Officer (EHO). The EHO then carries out case investigation and follow-up with assistance from clinic nurses and the DHO as appropriate. A weekly Disease Notification system is in place. The transfer of information follows a reporting system: clinic-hospital-district office-provincial information system. If no cases of a reportable disease are seen, a “zero report” should be sent. Weekly reports must arrive at their destination no later than 9 days from the closing day of the week being reported. However, individual case investigation forms for neonatal tetanus, AFP and measles are to be sent or faxed immediately to the relevant authorities and the EHO.

If a case of AFP is reported, all children under the age of 5 in the entire district in which the case is reported must receive a dose of OPV regardless of their immunization history. If the case occurs in children older than 5, those age groups must be targeted as well. Upon confirmation of a neonatal tetanus case, a supplemental immunization activity should be planned and implemented. TT should be given to women of childbearing age living in the same location or sharing the same immunization services, regardless of their TT immunization history. If a case of measles occurs in an area, the first step is to review vaccine coverage in the area. If immunization coverage is deemed not adequate, or data is incomplete, then a rapid vaccination program should be planned and implemented within 1-2 weeks. The primary vaccination age group is unvaccinated preschool-age and school-age children.

The KZN DOH has set the following monitoring goals and objectives for clinic and district level officials:

### **Timeliness of Case and Outbreak Reporting**

Clinic and district level officials should:

1. Receive notice of 100% of AFP cases within 15 days of the onset of paralysis.
2. Receive notice of 100% of measles outbreaks within seven days of onset, and
3. Receive notice of 100% of NNT cases that occurred.

### **Percentage of Reported Cases and Outbreaks Investigated**

Clinic and district level officials should:

1. Investigate 100% of AFP cases within 48 hours of reporting.
2. Investigate 100% of NNT cases within 48 hours of reporting.
3. Investigate 100% of measles cases within 48 hours of reporting.

### **Percentage of Reported Cases and Outbreaks with Appropriate Response**

Clinic and district level officials should:

1. Respond to 100% of AFP cases.
2. Respond to 100% of neonatal tetanus cases.
3. Respond to 100% of reported measles cases.

To increase district capacity to meet DOH surveillance goals and objectives, the project will monitor and facilitate the process of record keeping and reporting to ensure that this is correctly implemented and that the EHO receives reports in a timely fashion from clinic and hospital staff. The project will also follow up with the office of the Ndwedwe EHO to ensure that it has the operational capacity to carry out appropriate responses (follow-up of cases at field level and containment of outbreaks). Also, where necessary, the project will engage assistance from other levels of the DOH for additional support.

The project will work with trained TBAs and the CHCs as they participate in promulgating lay definitions of reportable EPI diseases in the community and encourage them to bring children displaying these symptoms to the clinics. The DOH has already promulgated a set of lay definitions of these diseases for use by community leaders. The NDCSP has translated these into Zulu and submitted them to the Department for their review. The project will pre-test these Zulu definitions in Ndwedwe before implementing them in the community. The NDCSP will then share the results with the DOH.

### **New and Innovative Activities or Strategies**

The Project's innovative IMCI strategies relating to HH/C-IMCI and community based monitoring are described under the **New and Innovative Activities or Strategies** section of the **Control of Diarrheal Disease** intervention.

## **E. MATERNAL/NEWBORN CARE**

The Ndwedwe Health Sub-District Plan places a high priority on improving maternal and newborn health and in reducing maternal and perinatal mortality. Major interventions are needed to minimize the levels of deaths due to and surrounding childbirth, particularly the provision of

basic obstetric care at and after delivery. The key objectives of the DOH strategic plan for maternal health are:

- To reduce maternal mortality
- Reduce maternal mortality due to unsafe abortions
- Strengthen and expand the national programs for cervical cancer and breast cancer awareness and screening
- Reduce the incidence of violence and rape against women.

The level of effort for the project's Maternal and Newborn Care intervention during Phase II will be 15%, down from 30% during Phase I. The NDCSP's specific results-based objectives relating to MNC are: 1) At least 60% of mothers will be aware of three or more of the danger signs in newborns that require immediate treatment; 2) 40% of CHCs will have established a community-based health fund to cover health needs designated as priorities by the community such as transportation for obstetrical emergencies, incentives for HBCVs and TBAs, etc., 3) During their last pregnancy, 50% of women will have made an antenatal visit during the first trimester of pregnancy and at least three antenatal visits thereafter, and 4) 80% of midwives in Project area health facilities will be trained in the PEP modules.

The project will encourage women to give birth in facilities by improving the skills and attitudes of service providers, and will also improve the skills of those attending home births. The project strategy for achieving its goals will include: 1) a multi-channel communications component to increase use of clinic services, based on the results of community-based qualitative research (PRA) and 2) the strengthening of safe delivery skills among TBAs as well as nurses and midwives.

The beneficiaries of this intervention are the 49,073 women of childbearing age in the project area and the estimated 10,404 infants who will be born to them during the project period.

Given that MCH services are provided free of charge by the new South African government, available resources for late generation drugs are scarce. MCDI will carefully review the technical and financial considerations with the DHSMT and the DOH to determine the level of governmental support for examining alternative approaches to drug supply, including the potential of obtaining additional funds through cost sharing.

Despite the resources available to the area under the new National Health System (for example, the 2000 public health expenditure for KwaZulu-Natal Province was R786 (~US\$77) per capita, compared to R418 per capita spent during 1997-1998), the Ndwedwe District faces a number of constraints in attempting to institute a democratic and egalitarian organization of services, including adequate maternal and newborn care. First, the presence of endemic political violence (as well as economically motivated violence) has characterized the area for many years and limits the mobility of both service providers and their clients, particularly at night. Second, as is true in many districts in the province, Ndwedwe has been and continues to be without a fully functional district-level health system. Instead, it is served by a fragmented mosaic of service providers who are supplied and supervised by numerous different institutions, until the unified District Health System, under development since December 2000, is finalized. In addition, the bitter legacy of

apartheid and political struggle remains in an oftentimes negative, distrustful relationship between the population and the health system.

## **1. Current Status/Coverage/Prevalence**

According to the 2000 National Primary Health Care Facilities Survey, 70% of clinics in the province provided antenatal services on a daily basis. This is a substantial increase from 25.8% in 1998. In addition, 71.4% of the mobile clinics provide antenatal services, which is lower than the national figure of 80.4%. Further, 80% of the clinics offered postnatal services, approximately 30% more than in 1998. The availability of HIV testing in KwaZulu Natal has decreased from 48% in 1998 to 40% in 2000. MCDI's own Health Facility Assessment, conducted in March 2001, found that the "met need" for emergency obstetric care could not be computed due to many reasons. First, information regarding the total number of live births in each clinic area was not readily available due to the fact that the catchment area of each clinic is difficult to define exactly, and in addition, catchment areas sometimes overlap, resulting in double counting. Home deliveries are also not counted. Second, as emergency obstetrical care (EOC) is provided in referral hospitals and not in clinics, statistics were not readily available regarding the number of obstetric emergency referral cases accepted annually from a given area.

According to Ndwedwe Sub-district 2001 DHIS data, 2805 women had received a first antenatal visit and 7136 were seen for follow-up antenatal visits. A total of 1742 pregnant women received a tetanus toxoid (TT) 3<sup>rd</sup> booster dose, and 169 mothers were under the age of 18 years. The data show that 155 children born were of low birth weight (less than 2500 grams) and there were 9 stillbirths.

New data from the *South African Health Review* (Health Systems Trust, 2001) indicates that in KwaZulu Natal province, the percentage of women who received tetanus toxoid vaccine in 1998 is 74.9%, much higher than the national average of 58.8%. Also, 82.6% of women had medical assistance during delivery, in par with the National average of 84.4%. The antenatal HIV prevalence in KZN in 2000 was 36.2%, approximately 12% higher than the National average. The infant mortality rate in 1998 was 52.1 per 1000 live births for the province compared to the national average of 45 per 1000 live births. The KPC data for 2001 indicates that the percentage of mothers who reported making an antenatal visit during the first trimester and at least three antenatal visits thereafter remained considerably low at 20%.

The overall cesarean section rate in KZN hospitals is 21%. According to the Provincial Health Information System, 895 maternal deaths had been notified in KwaZulu Natal between December 1997 and December 2001. Sixty-one percent (61%) of these maternal deaths occurred in the post-partum period. Hypertensive diseases of pregnancy are still the major direct causes of maternal deaths followed by obstetric hemorrhage. The Provincial HIS also reports that AIDS and HIV related conditions are the major indirect causes of maternal deaths. Figures of these deaths are not thought to be accurate because a number of deaths that occur at home (mainly in the postpartum period) and in the private institutions are not recorded.

Ndwedwe's TBAs report that the number of births in the Ndwedwe district has decreased considerably over the past several years. Although they did not know for certain why this is the case, they suspect that fear of AIDS may be having an impact.

Although ostensibly all women who present for prenatal care are tested for syphilis, it is not clear what percentage makes a second antenatal visit and receive the results of their test, and therefore, treatment as needed. Postpartum care is available at clinics, but is underused. Reasons for this will be explored during the regular supervisory monitoring visits conducted by project staff.

Nationally in 1990, half of all deaths to children under one were due to perinatal causes, 25% due to infectious diseases, and 11% due to respiratory problems, which indicates the importance of improving perinatal care.

According to a report by Medical Research Council and South African Department of Health (2000), the presence or absence of avoidable factors was documented in 2733 cases of perinatal deaths. Patient related avoidable factors were reported to be present in 35% of perinatal deaths, followed by health worker related (29.1%) and administrative causes (7.4%). The most common patient related avoidable factor was no antenatal care, late or infrequent attendance at antenatal clinic (20% of all cases), and delay in seeking medical attention during labor (10% of all cases). The most common health worker related factors were inappropriate response by health workers to problems identified during antenatal care and monitoring fetus during labor (10% of all cases) and delay by health workers in referring patient or call for assistance (4% of all cases). Lack of transport was the most common administrative factor.

ANC services are provided at mobile clinics. Tetanus toxoid injections are also given during mobile clinic rounds. The problems families have accessing health care in Ndwedwe have been described under the **Major Opportunities and Constraints to Maternal and Child Health in the Sub-District** section of the **Program Site Analysis**.

## **2. Causes, Current Beliefs, Knowledge and Practices and Care-Seeking Behavior**

As mentioned above, a lack of transport in the district, particularly at night, is a major barrier to access. Women mentioned this during the baseline KPC survey and focus groups, but also mentioned the negative attitudes of clinic workers, who sometimes criticize them for coming in too early or too late during their pregnancy. In addition, there is no accepted waiting place in some clinics for women who have begun labor but who are not in active labor. Women sometimes hesitate to make the trip to one of the short-staffed clinics for fear that they will get there and the midwife will not be there. Some women have said that they prefer to give birth in the comfortable surroundings of their home.

According to data from the 2001 KPC, 84.3% of mothers had delivered their last child at a hospital or clinic. 82.2% of the mothers reported that their deliveries were assisted by a doctor, nurse or a traditional birth attendant. 60.4% of the mothers reported that they were tested for AIDS when pregnant with the child.

Discussions with the NDCSP Training Coordinator indicate that there is a great need to educate mothers of the need to seek antenatal care. For example, she stated that during a TBA workshop organized in 2000, one of the mothers said that she had had 7 children and did not seek any antenatal care.

The staff has a positive attitude and believes that appropriate care of the mother and the newborn is critical. The staff feels that as a result of the project's interventions and trainings of TBAs, more and more mothers have resorted to clinics in seeking care and in delivery of their child. This is also evidenced by the KPC data, which indicated that almost all mothers delivered at a hospital or a clinic. They perceive the role of the TBAs in educating mothers and families in seeking early and timely maternal and newborn care as critical. The staff stated that TBAs know to refer all mothers for modern care, and envision that more and more families will be aware and seek screening for HIV to prevent mother-to child transmission of HIV as the project continues its work in the district.

In a pregnant woman, Oedema (“ukuvuvuka”), convulsions (“ukudlikiza”) and bleeding (“ukopha”) are considered to be danger signs requiring prompt care. In a newborn, lethargy (“ukukhathala”), yellowish discolouration of skin (“ukuba nombala ophuzi”) and failure to feed (“ukunganceli”) are considered to be danger signs. There are no known traditional practices to manage these conditions, which is probably why so many mothers seek care at a hospital. The project will conduct PLA/qualitative research to further explore local words for danger signs recognized as serious, understand their local management practices, and to understand the signs and symptoms of obstetric complications that lead women and families to seek outside help.

For many illnesses, families seek outside help first among neighbors, particularly “grannies,” older, respected women who often function as “Incidental Birth Attendants.” Mothers tend to make decisions in the household about when and from whom to seek outside care. Although it is not necessary to seek permission from other household members such as a husband or mother in law, community members state that these relatives must be informed of a decision to seek outside care, and in the case of antenatal or delivery care, their help may be essential. Although it is socially accepted that the male holds the responsibility to pay for health care, most mothers stated that they had sufficient resources to seek care themselves if necessary.

### **3. DOH Policies, Current Public and Private Services**

The 2000 National Guidelines for Maternity Care in South Africa (a manual for clinics, community health centers and district hospitals), and a policy and management guideline for common causes of maternal deaths entitled “Saving Mothers” provide extremely clear instructions and protocols on maternal and newborn care.

The National Guidelines manual clearly defines the functions, staffing and facilities at the clinic, community health center, level 1,2,3 hospitals and emergency transport systems. According to the Guidelines, all women that attend ANC should be issued with an antenatal card. This is the principal record of the pregnancy and should be completed at each antenatal clinic visit and retained by the mother until delivery. A pregnant woman is encouraged to book for antenatal care as soon as pregnancy is detected, even as early as 4 or 5 weeks gestation. The following are the essential screening investigations:

- Syphilis serology. Non specific reagin tests (RPR, WR, and VDRL) are performed, using a rapid card test.
- Rhesus (D) blood group, using a rapid card test

- Hemoglobin level, using a portable haemo-globinometer or copper sulphate screening method
- HIV serology. Testing must follow accepted principles of voluntary counseling and testing. Urine dipstick for protein and glucose.

All the above tests can be performed by midwives or appropriately trained auxiliary nurses at the clinic on site. In addition, the following medications and vaccines are given to all pregnant women:

- Ferrous sulphate tablets 200 mg daily, to prevent anemia
- Folic acid tablets 5 mg daily, only in the first trimester of pregnancy, to help prevent neural tube defects
- TT immunization, to prevent neonatal tetanus (in areas where neonatal tetanus is still prevalent)
- -0.5 ml, 3 doses given at 4 weekly intervals
- -Only one dose needs to be given in subsequent pregnancies
- The detection of hypertension and proteinuria should be the main focus of follow up for antenatal visits.

Latent phase of the first stage of labor is diagnosed if the cervix is  $\leq$  3 cm dilated and active phase of the first stage of labor is diagnosed if the cervix is  $\geq$  4 cm dilated. All findings of maternal condition, fetal condition, and progress must be recorded on a partogram. Failure to use a partogram during labor constitutes substandard care. Details on the management of the second stage, the third stage, the fourth stage of labor including management of the puerperium and home delivery are attached as Annex X.

For abnormalities of the first stage of labor and its management, information on oxytocin for induction or augmentation of labor, fetal monitoring, abnormalities of the second stage of labour, cesarean section, emergencies during labor, cord prolapse and its management, shoulder dystocia and its management are described in detail as Annex X.

Abnormalities of the third and fourth stages of labor include retained placenta (defined as 30 minutes elapsed after delivery of the baby), primary postpartum hemorrhage, and abnormalities of the puerperium. Details of its prevention and management are described in detail in Annex X.

Immediate care of the normal newborn includes:

- Wrap the infant in a warm dry towel in a warm environment
- Use clean surgical gloves when handling the baby
- Stimulate the baby, if necessary, by rubbing the towel or tapping the feet
- Do not suction the pharynx or give additional oxygen if the baby cries or breathes well spontaneously
- Record the Apgar score at one and five minutes
- If all is well, hand the infant to the mother.

A detailed description of the immediate care of the newborn as well as descriptive guidelines (Annex X) on management of obstetric hemorrhage, which includes general preventative

measures, specific preventative measures, problem recognition, management, and referral and observation guidelines.

The project facilitates the DOH in implementing its DOH policy and guidelines and is in accordance in with the DOH guidelines and protocols. The project does not plan to influence any DOH policies relating to maternal and newborn care.

All Ndwedwe area clinics and hospitals provide prenatal care which includes weight and blood-pressure monitoring, iron and folic acid supplementation, TT vaccination, blood tests (including blood count and RPR), and treatment of infections (including STIs). The March 9,2001 Health facility assessment survey indicates that in Ndwedwe district, of the 6 clinics surveyed, all had maternity beds in varying numbers and all had professional nurses to provide maternal and newborn care. Staff at all but two of the clinics reported that they have been trained in basic essential obstetric care. Comprehensive essential obstetric care (blood transfusion) is available in one of the clinics and none had facilities for a C-section. High-risk and complicated cases are referred to Osindisweni or Montobello Hospitals for prenatal care; and delivery at regional hospitals (sometimes in Durban) is planned.

All women are screened for STIs and attend 5 ANC visits. The project is currently training TBAs using a TBA training manual developed by the project for conducting safe deliveries and monitoring pregnant women. As a result of the TBA training program, skills have improved with increased numbers of early and appropriate referrals.

The Maternal and Newborn care intervention will use the following Perinatal Education Program (PEP) modules to train nurses on maternal and newborn care: (a) introduction to newborn care, (b) introduction to maternal care, (c) introduction to perinatal HIV/AIDS and (d) advanced midwifery. The PEP program is a self-study module, which consists of maternal, neonatal care and HIV/AIDS modules for pregnant, and newborns.

The project will train all HBCVs, CHWs and members of CHCs in maternal and newborn care. The training will focus on recognizing danger signs during pregnancy, during delivery and after delivery and key signs and symptoms of newborn care. The project in partnership with the DOH will adapt the above-mentioned PEP modules to train HBCVs, CHWs and CHC members. In addition, the handful of danger signs for newborns, a checklist developed by the NDCSP, will be used as an easy reference tool by these communities based workers (see Annex XIX).

TBAs are trained in safe delivery practices and newborn care using the TBA training materials developed by the NDCSP. During Phase II, the project will expand its training to cover untrained TBAs in the new cost extension project site as these workers have proved very helpful in communicating the project's objectives and in enabling more and more mothers to deliver at hospitals. The training program itself emphasizes labor, delivery and postnatal care, since the majority of TBAs see women only after labor has begun (often because it is at night and transport is unavailable). However, TBAs are taught to refer all women to facilities for prenatal care, to palpate for lie and multiple pregnancies, to counsel mothers on diet, nutrition and TT immunizations, and to alert mothers to the signs of possible complications. They are also trained to ask the mother to assemble required supplies (a new razor blade, clean thread. etc.) prior to the delivery, and to discuss transport plans in case of emergency. The identification of complications

and danger signs, based on the “Gold Standards,” is a focal point of the training. The training program emphasizes clean, non-intrusive delivery practices, familiarizes the TBAs with problems that might be encountered during labor and delivery, and demonstrates coping techniques such as fundal massage to arrest bleeding. Skills taught for immediate care of the newborn include clearing of the mouth, drying, wrapping and immediate placement at the breast, cutting the cord with new razor blade, and assessing breathing, color, heartbeat and floppiness. They review maternal health card and attend to only those pregnant women who carry a card. All those whose cards are marked red are recognized as needing referrals.

Only doctors and nurses are allowed to administer antibiotics for maternal and newborn care.

Deliveries take place at all clinics, but only the two hospitals in the District are equipped to deal with serious obstetrical emergencies. Nurse midwives administer oxytocin injections or perform abdominal massage in case of hemorrhage, but clinics do not perform any surgery or give blood transfusions (there are no physicians practicing in any of the clinics, and no laboratory facilities). There is one physician who visits Ndwedwe clinic once a week for three hours to deal with pension cases (i.e. people who are not self-supporting due to some medical condition). He also looks at any cases referred to him at that time by the clinic sisters.

Should an emergency develop at the clinic level, the midwife stabilizes the patient for transport by ambulance to Osindisweni, Montobello or, in the most serious cases, to King Edward Hospital in Durban (a recognized center of excellence). The clinics in the southern part of the district call an ambulance from Tongaat, about a 30-45 minute drive away; while the clinics in the north share an ambulance between them and summon it by two-way radio.

Professional nurses attached to clinics provide antenatal checkups and provide TT vaccinations. Nurses assess the stages of pregnancy and determine if the woman requires referrals. They are able to distinguish a pregnant woman’s condition based on clinical presentation. They diagnose problems at an early stage and prescribe required drugs. They also perform vacuum extraction for cephalopelvic disproportions that are late to push out.

#### **4. Intervention-Specific Approach**

The target group for this intervention is pregnant woman, newborns, and women who have recently given birth. At the community level, TBAs have been trained to conduct safe deliveries, care for the newborn and refer cases that require hospitalization. TBAs advise mothers to arrange for delivery kits (consisting of a clean blade, gauze, soap, clean thread, and clean cloth) to perform deliveries. During Phase II, the project will build on the successes derived from the TBA training of the project to date, but with less emphasis on supervising deliveries and more on their role as community educators, especially on promotive and preventive aspects of maternal and newborn care. Only mothers who have a maternal card at their disposal are assisted by TBAs in deliveries, the rest are referred. This helps to increase the percentage of mothers seeking ANC. TBAs teach mothers to identify signs of newborn illness and look for signs such as hypothermia, asphyxia neonatum, low birth weight. In addition, mothers are motivated to practice exclusive breastfeeding. The TBA training, which has had a tremendous impact on maternal care, will be replicated in the new cost-extension project. A total of 40 TBAs have been trained and are active

in the project area. According to the project's Training Coordinator, each TBA conducts 2 or less than 2 deliveries on average during a year.

Plans have been discussed with the District Program manager of the DOH to train community-based workers (CHWs, HBCVs, CHCs) in maternal and newborn care danger signs. This will help them to advise mothers to seek early medical care and conduct health education programs in their respective communities. The report of the project's Final Evaluation (conducted by Dr. Edmund McGrath in January 2002) has testified to the added value of these community volunteers. The evaluation indicates that the role of the TBAs is well established and they command respect in the community. There is little doubt that this group can make a major contribution in the project led efforts to promote improvements in antenatal care for pregnant women and in perinatal care for mothers and newborns.

At the clinic level, pregnant women are provided antenatal care services, including TT vaccinations, iron and folic acid tablets. In addition, a maternity case record is maintained for each pregnant woman. Fortnightly mobile clinics also provide ANC services at the village. The clinics also conduct deliveries and refer obstetric emergencies to designated referral hospitals. The nurses are linked with the TBAs and work collaboratively in providing maternal and newborn care.

The maternal and newborn care intervention will be linked with IMCI. The main linkages will be in educating nurses on signs of newborn illness. The HH/C-IMCI approach adapted from the World Vision Bergville CSP will be initiated in the project area and linked to care of the newborn and help educate community health workers to make appropriate referrals. In addition, the current KZN IMCI guidelines from February 2001 will help clinic staff to appropriately assess, classify and treat the sick young infant age 1 week up to 2 months (see Annex VIII).

In order to increase access to maternal and newborn care services, the project will inform mothers on key signs and symptoms that will enable them to recognize and seek timely and appropriate treatment from clinics. The project is negotiating with the DOH for an ambulance in clinics, especially the remote rural clinics (Wosiyana, Thafamasi) and the 2 new clinics (Asidumbini and Schipini). The presence of TBAs and timely referrals will reduce the chances of emergencies. Under normal conditions, (i.e., during daylight, when the roads are not impassable, which often happens during the rainy season) clinic workers are able to radio for an ambulance to transfer a sick child from the clinic requiring referral to a hospital. The ambulances are usually able to arrive at the clinic within an hour. However, the case is quite different at night, when the clinic is ostensibly only open to receive maternity cases. In addition, ambulances do not go out at night for security reasons. To a limited extent, clinic workers are able to assess, based on their location and the time of day, the feasibility of obtaining transport to the referral facility in terms of availability of transport, and ability of the family to pay if commercial transport is necessary. If the clinic worker feels that the family will not be willing or able to find and/or pay for the commercial or public transport necessary for the trip to the hospital, they usually try to stabilize the woman or child until transport is available, or try to provide the best treatment possible at the clinic.

If a pregnant woman or newborn needs to go to the clinic, the CHWs, HBCVs, and TBAs often help to identify someone with transport who can take them, or they themselves walk with the

mother to the facility. Unless they have their own vehicle, it is unlikely that a family will leave home at night. The CHC formed in each village will form the central community decision making body and will be linked with the DOH. CHCs will develop and implement health activities (including BCC campaigns), create and maintain OVC registers, assist families caring for orphans to obtain available government benefits. PLA exercises will be conducted to explore the potential of mobilizing a transport system at the respective communities, i.e., for obstetrical emergencies or to transport sick children.

Ndwedwe District has relatively good access to essential and emergency obstetric services during the day. The six clinics provide essential services and the three hospitals in or near the district provide emergency obstetric care, including caesarean sections. There is no place in the district, which is greater than about 20 km from one of these hospitals. Thus existence of services provides less of an obstacle than the problems of transport, since many areas of the district are on small dirt roads, where transport of any kind is extremely rare. Once a woman has reached a clinic, theoretically the clinic can radio to the hospital to send the ambulance. The longest distance that a woman within the district might have to walk from her home to a clinic would be about a six hours walk, thus about 70% have adequate access to essential care.

However, obstacles to ambulance transfer of obstetric emergencies also exist. A 2000 National Primary Health Care Survey stated that in Kwazulu Natal Province, only 55.3% of fixed clinics reported an emergency vehicle response time of one hour or less, however, this was a large increase from the percent of fixed clinics who could report the same in 1998 (29%). Fear of violence (especially at night) prompts ambulance drivers to refuse to drive at night. Ambulances are sometimes leased from private contractors, who also sometimes have hesitations about letting their vehicles go out at night. Transport, at night especially, is thus a real difficulty.

The National Primary Health Care Survey also found that 87.5% of fixed clinics in the province had a telephone as a means of communication in 2000, which is higher than the national figure of 80.5%.

MCDI's 2001 health facility assessment indicated that although they varied in number of beds, the 6 clinics surveyed had maternity beds and 4 clinics had pediatric beds. All clinic nurses have been trained in universal precautions and Asepsis/Antisepsis procedures. The project will conduct refresher training and use the DOH modules or partner with Engender Health in using their infection prevention and control modules. The findings also indicated that two of the clinic nurses were not trained in basic essential obstetric care. The project will use the PEP modules to conduct training for these facilities. All previously trained nurses will be provided refresher training in essential obstetric care using the PEP module. Although supervisory visits do exist, there is lack of uniformity and routine supervision. The project will work with the DOH to establish a reliable system in place, to increase the efficiency of the supervisory mechanism.

The NDCSP facilitates the DOH in implementing its maternal and newborn care protocols. The project will use self-study PEP modules for educating nurses on maternal, neonatal care and HIV/AIDS for pregnant and newborns. The project will also use the DOH prescribed or Engender Health modules to train nurses in infection control. The project will continue training of TBAs extending to new areas. The goal of the TBA training program is to train a cadre of influential older women who are currently active as TBAs in the catchment area of each of Ndwedwe's

clinics. The clinic catchment areas, defined as an 8 km radius around the clinics, are being emphasized to facilitate the establishment or strengthening of continuous links between clinics and trained TBAs for the purposes of referral, follow-up and supervision. MCDI has developed a referral card for semi-literate TBAs (see Annex XII) that will inform the clinic staff of the problem identified by the TBA and, when collected monthly by project staff, will allow tracking and monitoring of trainees' activity levels. A TBA record-keeping system has also been developed, and the first group of trainees has been trained in its use. Supervision of trained TBAs (including refresher training for quality assurance) takes place during quarterly meetings with nurses in the referral clinic.

MCDI has made extensive use of materials from a successful USAID-supported project in Ghana, as well as the PVO CSSP "Gold Standards" in preparing its own TBA training materials and curriculum. During the planning grant period, MCDI received technical assistance from an independent consultant who is a U.S. nurse-midwife. This consultant reviewed MCDI's TBA training materials and revised them for ease of usage and to conform to current clinical protocols based on her advice and on available materials from MotherCare and WHO. The training program itself emphasizes labor, delivery and post-natal care, since the majority of TBAs see women only after labor has begun (often because it is night and transport is unavailable). However, for those instances in which they are consulted earlier, the TBAs are taught to refer all women to facilities for prenatal care, to palpate for lie and multiple pregnancies, to counsel mothers on diet, nutrition and TT immunizations, and to alert mothers to the signs of possible complications. They are also trained to ask the mother to assemble required supplies (a new razor blade, clean thread, etc.) prior to the delivery, and to discuss transport plans in case of emergency. The training program emphasizes clean, non-intrusive delivery practices, familiarizes the TBAs with problems that might be encountered during labor and delivery, and demonstrates coping techniques such as fundal massage to arrest bleeding. Skills taught for immediate care of the newborn include clearing of the mouth, drying, wrapping and immediate placement at the breast, cutting the cord with new razor blade, and assessing breathing, color, heartbeat and floppiness.

TBAs learn to assist the mother to understand the information presented by the Road to Health Card, and they are also taught to support breastfeeding and to counsel mothers on common breastfeeding problems that might occur. They are also being trained in the "Handful of Danger Signs for the Newborn" which identifies five postpartum signs that a child should be immediately taken to the clinic.

All referrals start from the community. The TBAs are trained to assess and refer pregnant women and newborn for referral care if needed. The clinics have an established referral mechanism that functions effectively. Each TBA will be linked with respective clinic nurse to ensure speedy referrals. The TBAs perform follow-up visits as part of their traditional practice, and the training program includes identification of conditions that require referral at this stage. The TBAs are taught to insist that their clients visit the nearest clinic for a post-natal check-up and immunizations, and to ask to see the new baby's Road to Health Card as proof that they have complied.

A referral has to follow the prescribed protocols as follows:

Childs' home → health-facility post or clinic → 2<sup>nd</sup> level referral (Osindisweni, Montebello, M.G. Hospitals) → local hospital. All obstetric emergency cases and newborns requiring advanced care are referred to King Edward and Addington Hospitals.

MCDI's Health Facility Report of March 2001 indicates that all the 6 clinics surveyed had respective referral hospitals. The average distance varied from the closest being 4 kms away (less than 2 miles) to the most distant being 80 kms (approximately 35 miles) away. Most of the clinics have ambulances or mechanisms in place to arrange referral if necessary, although, as stated previously, there are serious limitations to transport resources in Ndwedwe.

The TBA Record-Keeping System (Annex XII) is designed for low-literate users. The training curriculum for TBAs has been translated into Zulu and is being shared with the DOH and other groups working in the region. Individual documentation for pregnant women consists of a maternal card, which is kept by the health facility after the birth.

Traditional healers will be targeted in order to better understand their knowledge and practices relating to MNC and to advocate for improved maternal and child care practices in communities. MCDI is conducting a study (funded by Margaret Sanger Centre South Africa International) to understand the role of Traditional Healers and the barriers to collaboration with the biomedical health system. A follow on project is anticipated, which will enable implementation of some of the approaches and strategies identified through the initial research as being critical to forming positive relationships and networks between traditional healers and health facility-based personnel.

During the NDCSP's planning grant period, it was determined that a comprehensive TBA training program was not a cost-effective expenditure for the Project but that many Ndwedwe women were giving birth outside health care facilities, either by design or unavoidably. In these cases, it was found that older women ("grannies") were sometimes called to assist at home births. These women could be termed "Incidental Birth Attendants" in that they attend a few births a year – as Ndwedwe is sparsely populated and grannies do not travel outside walking distance of their homes to reach laboring women.

Although 2001 baseline KPC findings indicate that most women are giving birth at health facilities, the project will explore the feasibility of developing a short training course in delivery techniques for these Incidental Birth Attendants, so that they can be of service to community women by alerting them to danger signs in themselves and their newborn infants. They could also be tasked with promoting awareness of breastfeeding practices for newborns in a high HIV-prevalence setting. The scope of this training will focus on improving their capacity to referral patients (rather than to create a separate cadre of TBAs). According to government recommendations, this includes avoidance of supplemental and pre-lacteal feeds. In addition, traditional practices among IBAs that may be harmful to the mother or infant -- such as administration of pharmacologically active herbal substances to pregnant women and enemas to newborns -- could be discouraged. If, following additional qualitative research to determine the extent to which these Incidental Birth Attendants are indeed operating in Ndwedwe, training for these grannies is considered appropriate, short workshops could be implemented with the following goals:

- To raise pregnant women’s awareness of the danger signs of pregnancy, labor and delivery, and in newborns, and make appropriate referrals,
- To promote optimal infant feeding practices,
- To discourage potentially harmful practices among Incidental Birth Attendants.

The workshops could be implemented by the NDCSP’s Nurse-Midwife/Trainer. On the final day of the workshop, she could assist each IBA to develop an action plan to disseminate information on danger signs to the women of their communities. After participating in the workshops, the IBAs could be included in CHC meetings, where their expertise will be available to the CHC members in the planning of their activities. However, as stated above, the NDCSP will first need to conduct additional research to determine the appropriateness and necessity of conducting this training.

There are no drug retailers in the area and therefore the project will not work with them to ensure appropriate pharmaceutical management for maternal newborn care.

As stated above, prenatal care attendees are supposed to be tested for syphilis, and treated when they return for their results. It is not clear how well this system is working, since the project suspects there may be a fair amount of prenatal clinic dropout. Testing pregnant women for sexually transmitted diseases (STIs), and improving pregnancy outcomes by treating STIs, will be another module of the PHC nurse-training program. MCDI plans to continue to work with PATH on the introduction of low-cost, appropriate testing methodologies that will permit testing, diagnosis and treatment of syphilis and gonorrhoea in a single visit. Because KwaZulu-Natal is the center of South Africa’s HIV/AIDS epidemic, identification and cure of untreated STIs is likely to have a positive impact on the health and life expectancy of mothers and newborns. It may also help reduce the number of unexplained stillbirths and premature births that are contributing to the high perinatal mortality rate. PATH’s HIV testing technology has been introduced at the referral points where counseling is available and confidentiality is being assured. More information about MCDI’s experience with rapid testing in Ndwedwe is included under the “HIV/AIDS/STI” intervention section.

#### **4. Behavior Change Communication**

The NDCSP will utilize a clearly defined BCC strategy for its immunization intervention using the BEHAVE Framework, which is described under **Behavior Change Strategies** in the **Program Description** section.

The maternal and newborn BCC component of the project will be developed on the basis of qualitative research in which community understanding of maternity care issues, constraints to care-seeking, and preferred solutions to transport and other problems are explored. The behaviors that the Project seeks to promote include encouraging pregnant women and mothers to:

- Seek ANC in the first trimester followed by at-least three visits thereafter
- Deliver the child in a health facility assisted by a trained health care provider
- Improved home behaviors such as immediate and exclusive breastfeeding.
- Recognize danger signs that indicate that a pregnant, delivering or post-partum woman should see a health provider quickly
- Receive at least 3 doses of TT vaccination during pregnancy

- Make advance arrangements for (EOC) transport in case of night-time delivery and/or complicated delivery.
- In a newborn baby watch out and seek immediate care for five danger signs: difficulty breathing or sucking, fever, excessive crying, and excessive lethargy.

The project will incorporate local terms for danger signs in women and newborns, such as edema (“ukuvuvuka”), convulsions (“ukudlikiza”) and bleeding (“ukopha”), lethargy (“ukukhathala”), yellowish discoloration of skin (“ukuba nombala ophuzi”) and failure to feed (“ukunganceli”), in preparing health education messages and educating mothers on the need for prompt referral. In addition, the project will conduct a PLA/qualitative research to have an in-depth understanding of their practices and care-seeking behavior to develop appropriate health education messages. The target audience for the BCC activities of the maternal and newborn care intervention will be mothers and other key family members such as “grannies.”

For newborn care, the communication approach will focus on the use of the “Handful of Danger Signs” that the NDCSP has developed and tested with the trained TBAs (Annex XIX). The TBAs themselves will be encouraged to make home visits postpartum, but if the mother and a relative are taught the danger signs, the chances are higher that seriously ill women and infants will be identified and brought for care as needed. Mothers will also be encouraged to make a postpartum clinic visit for a routine check and first vaccinations. Monitoring of the quality of the Project’s BCC efforts will be done through periodic key informant interviews, client exit interviews, and focus groups.

These messages will be promoted through sources discussed above, including crèche operators, and project-trained CHWs, HBCVs, and TBAs, etc. Clinic staff will give educational talks and individual counseling during prenatal visits. TBAs will be trained to counsel their clients as described above, and to talk about these issues with other “grandmothers” at the Pension Day church gatherings, which they routinely attend. Crèche operators trained by MCDI’s local partner, TREE (Association for Training and Resources in Early Education), will transmit them to parents who use the crèches. CHCs will be encouraged to discuss these messages during community meetings, to ensure that men are aware of the importance of these issues. In addition, an integrated BCC package will be developed which will also comprise the maternal and newborn care messages that will be used by CHWs, HBCVs, and TBAs in educating mothers and families based on the HH/C-IMCI approach.

The health communication and maternal counseling strategy, therefore, includes encouragement of advanced planning for possible emergencies, such as by identifying and soliciting the cooperation of a neighbor with a motor vehicle who can transport the patient or summon transport, improved knowledge of women and their relatives of the danger signs in women and newborns, and improved sensitivity with respect to client-provider relationships on the part of clinic staff.

MCDI is now discussing with NPPHC and a local non-profit public interest media organization, the possibility of using cassettes of radio programs they have developed and recorded as part of public education sessions. MCDI will work with its collaborating partners, the DOH and local NGOs, to develop their planned health education programs for community mothers and their relatives. In addition, the community health committees (CHCs) will also mobilize communities

for adopting positive behaviors. As key local decision making bodies, these groups will assess the effectiveness of the key messages. In addition, focus group discussions and individual interviews with CHWs, HBCVs, TBAs, CHCs and mothers will allow the project to get an idea of the impact of the messages on caregiver practices, and to make adjustments. The final KPC survey will measure several key knowledge and behavior changes. The mobile clinics will also be used as a strategy for providing education to mothers and families.

## **6. Quality Assurance**

The maternal and newborn care intervention will ensure continuous quality in all its activities. For example, the TBAs are using a TBA referral form for referring a sick woman/mother/child (Annex XII). This helps to track the health of the women and the child before delivery, during delivery and during the postnatal period and make appropriate referral at the community level, which will increase the mother's timely access to care. In addition, the project's training coordinator collects information from each TBA on dangerous pregnancies diagnosed, births performed, the number of women who received antenatal education, complicate delivery diagnosed and referred, and postnatal complications diagnosed and referred. The tool also helps to extract information on immunization status, and sick children seen and referred. The project will develop a comprehensive tool as recommended in final evaluation that can record maternal-newborn data as well as indicators on other child survival interventions. As indicated above, the "Handful of Danger Signs" chart developed by the project will be used to educate mothers on newborn care. The project will develop pre- and post-test evaluation tools to monitor the quality of training for TBAs, as well as other community based workers and clinic nurses. As discussed with the DOH, the project will take the initiative to conduct monthly monitoring of clinics using a checklist to ensure that essential drugs are available. This will help to regulate pharmaceutical supplies and ensure efficient logistics management.

## **7. Availability of Drugs/Supplies**

Iron and folic acid tablets, oxytocin, ringer lactate solution, vacuum extractors hexoprenaline, urinary catheter, ampicillin, amoxycillin, cotrimoxazole, erythromycin, metronidazole, gentamicin, oxygen, and haemoglobinometer are required for providing good maternal and newborn care.

According to MCDI's Health Facility Assessment Survey of March 2001, of the 6 clinics all had maternity beds of varying numbers. Four of the clinics had pediatric beds of varying numbers. Only one of the clinics had a facility for comprehensive obstetric care (blood transfusion), and no clinics had any facilities for C-section procedures. Five of the clinics had a delivery or labor room with a bed and lighting, and all but one had infant weighing scales. A cloth or towel to dry the baby were available with 5 of the clinics, however, this was not satisfactory in one clinic, and only 4 of the clinics had blankets to wrap the baby. All clinics had educational materials related to maternal/antenatal and newborn health.

Syphilis test kits were available with only 2 of the clinics and blood transfusion tubes were available in all but one clinic. Medical and surgical equipment and supplies such as for cross matching of blood and collection of blood were available with all but one, long dressing forceps were available in 5 of the 6 clinics, and obstetric forceps were available in only 3 of the 6 clinics.

A haemoglobinometer was available at all clinics except one. Drugs such as ampicillin were available only at one of the clinics, hexoprenaline IVI at one clinic, cotrimoxazole at all but one clinic, and oxytocin was available at all clinics.

Of the two hospitals surveyed each had between 35 and 45 maternity beds. Montebello Hospital had 63 pediatric beds (including 41 big cots, 10 medium cots, and 12 crepes for children from birth to 1-2 months). Osindisweni Hospital had 55 nursery beds, and 16 cribs. There were 5 incubators, and 2 phototherapy machines for babies born with jaundice. A table and stool for gynecological examination were available and satisfactory in only one of the hospitals. A delivery/labor room with a bed and lighting were available and satisfactory in only one of the hospitals. In addition, an ambulance/vehicle for emergency transfer, cloth/towel to dry the baby, a blanket to wrap baby, and educational materials related to maternal/antenatal and newborn health were available and satisfactory in only one of the hospitals.

The likely constraints in regular supply are due to poor logistics supply and monitoring. The project will discuss with the DOH and ensure that the clinics have a regular and sustained supply of drugs and equipments essential for maintenance of services for the mother and newborn. The project will use the monthly clinic essential drugs list monitoring tool (see Annex XX) to ensure that the required supplies are continuously maintained.

## **F. INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI)**

The project's IMCI efforts will focus on the following aspects of IMCI:

- Helping to build the District's capacity to carry out IMCI in terms of having adequate and regular supply, logistics, supervision, and management systems.
- Strengthening IMCI in the District, through ongoing collaborations with the Provincial and Regional health officers. This includes arranging for government IMCI trainers to provide refresher training for already trained clinical staff and to provide training for those clinical staff who have not been trained.
- Using the KwaZulu Natal IMCI monitoring tools to ensure quality case management practices and supervision.
- As per the request from the DOH to extend IMCI to the community level, reviewing available HH/C-IMCI models with the DOH and incorporating key child survival messages pertinent to the project. The project will train community workers using HH/C-IMCI to educate mothers/families on key behavior practices.

### **1. DOH Strategies, Activities, and Training Materials**

The DOH's national IMCI effort is rolling out throughout South Africa. The KwaZulu Natal provincial DOH has adapted the World Health Organization's IMCI protocol to produce a new KZN IMCI guideline, effective since February 2001. Separate guidelines have been developed for care and treatment of the sick child age 1 week up to 2 months and the sick child age 2 months up to 5 years. A detailed description of the elements of the case management/health facility staff skills component of IMCI (for example, case management for diarrhea, malaria, pneumonia case management, etc.) is attached as Annex VIII. The malaria element of the IMCI

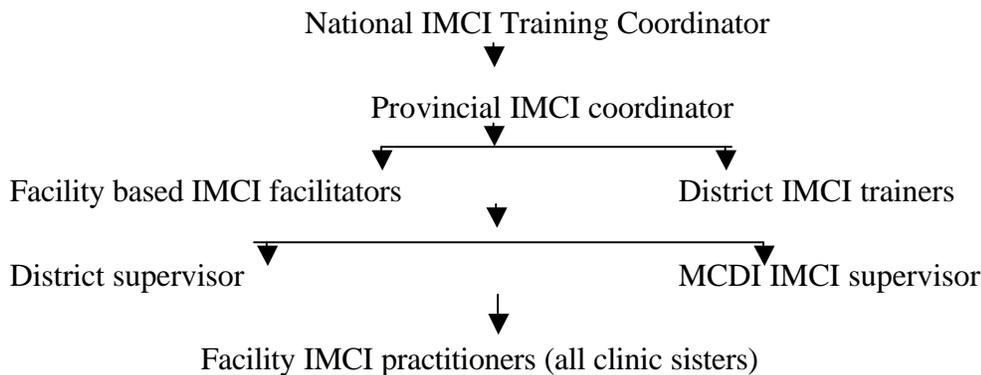
guidelines is not applicable in Ndwedwe District as malaria is limited to the area north of the Tugela River in KwaZulu Natal.

With these guidelines, health facility staff are provided with instructions on how to:

- assess, classify and treat the child for wheezing,
- teach the mother to treat local infections at home including the symptomatic treatment of an HIV positive child
- provide follow-up care and counselling

The DOH has an IMCI team in place and is expanding its training to cover most clinics in Ndwedwe. During Phase I, through its partnership with the DOH, 9 staff were trained in IMCI protocols and case management practices in the 6 clinics evaluated in the Health Facility Assessment of March 2001. In the two hospitals in the Phase I project area, 3 nurses were trained.

The IMCI supervisory support system and structure can be illustrated as follows:



In addition, Household-Community IMCI is currently being piloted in several sites in South Africa. Ndwedwe District will be one of these pilot sites. National guidelines relating to the HH/C-IMCI approach in South Africa have not yet been promulgated.

While the project works at the district level, the lessons learned from the successful implementation of the DOH strategies on the ground will be used to inform policies and programs at the provincial and national level. For example, the project's experience with the HH/C-IMCI approach will provide valuable lessons for possible expansion of the approach to other areas. For more information about the NDCSP's impact on DOH policy, see the section describing **MCDI's Role in Policy and Advocacy** under **Program Approach**.

## 2. Role of the Child Survival Project in IMCI

The NDCSP experience will function as a unique test of implementation of IMCI with support and training provided by an NGO in the region and KwaZulu Natal province. At the District Level, the NDCSP will help prepare the systems strengthening activities that need to take place before IMCI can be successfully implemented. The NDCSP's and the DOH's IMCI activities in the project area will be completely integrated, particularly as the NDCSP will be supporting the

government implement IMCI in its own facilities. Specific elements of the health systems strengthening component that the NDCSP will be involved with include strengthening the health information system, drug supply and logistics systems and organizing IMCI training for clinic nurses.

In addition, all government promulgated elements of the case management/health facility staff skills component of IMCI will be supported by the NDCSP. This will include providing supervision for clinic nurses in quality case management practices and in health facility supports. The 2000 National Primary Health Care Facilities Survey conducted by the Centre for Health Systems Research & Development indicates that in KwaZulu Natal Province, 62.5% of fixed clinics were visited by a nurse supervisor, which is 20% less than in 1997. The project team feels that supervisions must be systematic and regular to ensure quality case management practices and an effective implementation of IMCI.

The NDCSP will also provide the resources and personnel to undertake a systematic evaluation of the process of IMCI implementation at the district level in order to understand the factors which facilitate or hinder the introduction of IMCI in clinics in Ndwedwe. This evaluation will include not only an examination of any technical clinical inadequacies on the part of staff that may interfere with effective implementation, but will also include evaluation of the larger enabling environment of management and administration of the clinics. Based upon the findings of this evaluation, the NDCSP will formulate a training program to address key deficiencies, both technical and managerial. The recommendations flowing from this evaluation will be used by the government to inform the process of IMCI implementation throughout the rest of the Region and the Province.

The NDCSP Training Coordinator (who was trained in IMCI along with the district IMCI Facilitator) is supervising implementation of IMCI at the clinic level. The set of supervisory tools that will be used to ensure quality implementation includes: (a) a checklist of facility supports to strengthen the health systems, (b) a checklist for the case management of the sick child, and (c) a caretaker interview form to assess the case management practices of the clinical staff (attached as Annex XVII). The checklist of facility supports, for example, assesses the following:

- space and equipment,
- diarrhea treatment corners,
- immunization areas,
- clinic and referral services,
- the organization of case management tasks,
- the quality of records,
- management of drugs and supplies
- availability of drugs and other supplies in stock on the day of the visit.

The NDCSP will play a critical role in supporting implementation of the HH/C-IMCI approach within Ndwedwe as well. The NDCSP will work to ensure that the HH/C-IMCI approach implemented will incorporate the key messages of the project interventions. The project's partner community providers will be trained on key family practices using this package, which will empower them to educate families/mothers to adopt positive behaviors. In addition, the NDCSP will be involved with include working with the installation, training and mobilization of the CHCs to be instituted under the new DHS. The NDCSP will work with CHCs to conduct a

Participatory Research Appraisal (PRA) in the community, which will enable the CHCs to recognise some of the underlying social factors which cause childhood and maternal morbidity and mortality in the community. The project will then support the CHCs to develop action plans for addressing some of these social factors.

The role of the DOH includes: (a) assisting in adapting the IMCI package to the needs of KZN province, (b) training and supervising DOH clinic nurses in IMCI case management practices, and (c) ensuring the supply of necessary materials and logistics, such as drugs, for IMCI.

A copy of the signed agreement between the NDCSP and the District DOH that clearly identifies the roles and responsibilities of the Project with regard to IMCI is included in Annex III.

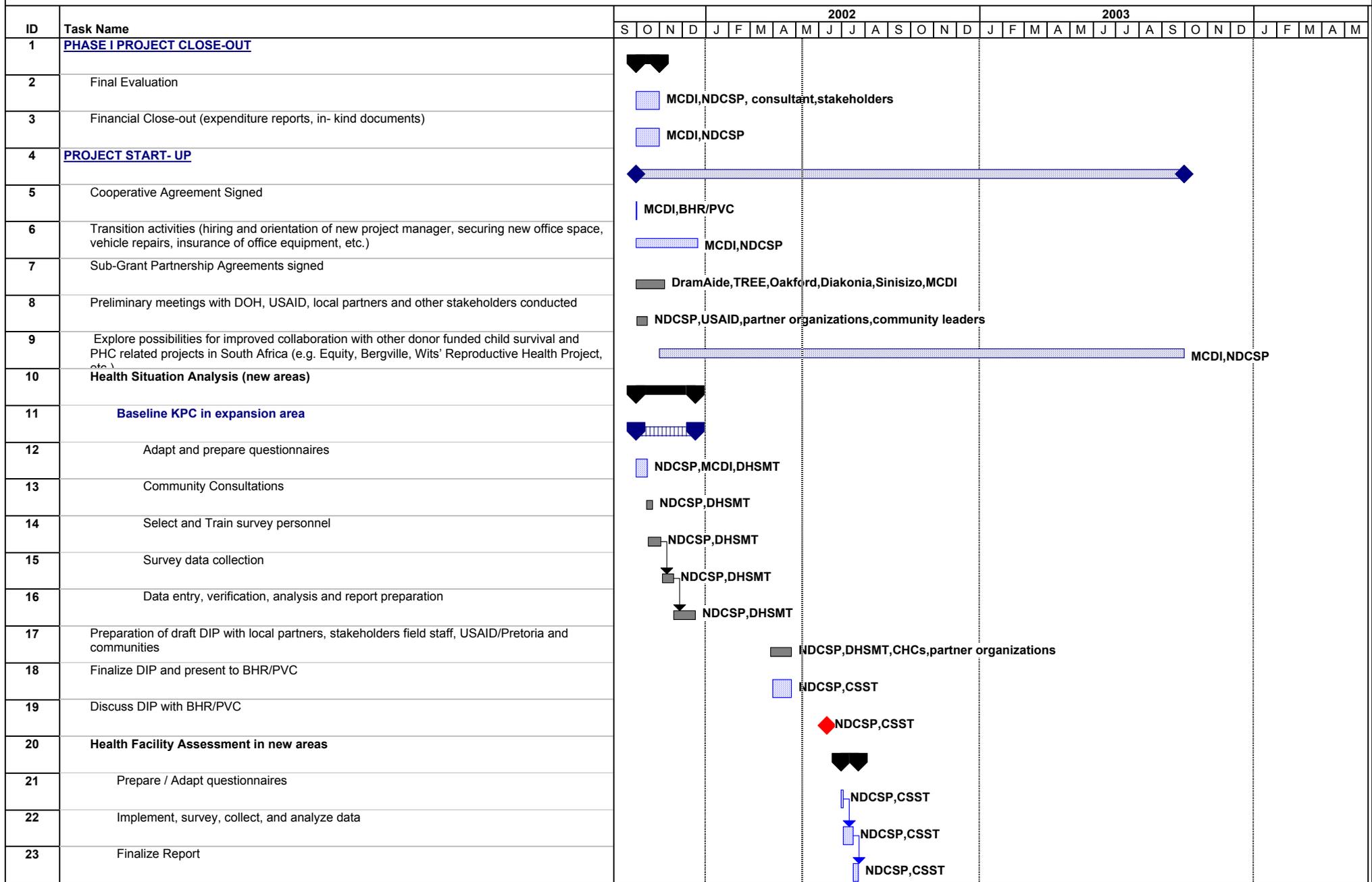
### **3. Specific Components of the Child Survival Project's IMCI Strategy**

The components of South Africa's IMCI approach which will be implemented by the Ndwedwe District Child Survival Project include diarrhea, pneumonia case management, immunization, and HIV. Details on the DOH policies and interventions are described above.

It is important to note that the IMCI strategy to be implemented in Ndwedwe includes a component which is not typically covered – that of social problems. These problems (including trauma, interpersonal violence, and social malaise, etc.) plague the New South Africa as much as other health problems, and present an enormous obstacle to care. Many women avoid health facility staff because they are weary of being ill-treated by persons in authority, even those of their own race. The NDCSP plans to carry out training in psychosocial counselling and sensitivity training for clinic staff as part of its IMCI-related training. As national guidelines for providing this kind of training have not yet been promulgated, the project will pilot an approach which is aimed at helping clinic staff be more open and empathetic to clinic attendees and their needs.

## **Annexes**

- I. Response to Final Evaluation Recommendations
- II. Report of Baseline Assessment
- III. Agreements
- IV. Resumes/CVs
- VI. Response to Application Debriefing
- VII. Map of Project Area
- VIII. IMCI Protocols
- IX. HIV/AIDS Protocols
- X. MNC Protocols
- XI. Clinic Collection Tools
- XII. TBA Tools
- XIII. Orphan's Register
- XIV. In-kind Budget
- XV. Workplan
- XVI. Patient Profile Checklist and Community-Based Monitoring Tool
- XVII. IMCI Checklists
- XVIII. Immunization Checklists
- XIX. Handful of Danger Signs for Newborns
- XX. Essential Drugs List

















ID	Task Name	Resource Names	2004												2005																
			S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
76	Train new hospital staff on use of Rapid Test	DOH,NDCSP	DOH,NDCSP																												
77	<b>Based on Needs Assessment conducted during Phase I, for HIV/AIDS/STIS at health facilities:</b>		[Timeline bar with diamond markers]																												
78	Assess status of introduction of cotrimazole prophylaxis for PLWA	NDCSP,DOH	NDCSP,DOH																												
79	Supervision and follow-up of HIV and syphilis rapid test implementation in all three referral hospitals	DOH,NDCSP	DOH,NDCSP																												
80	Conduct training on counseling and for HIV/AIDS for facility-based nurses	NDCSP,DOH	[Vertical bars]																												
84	Conduct training on prenatal screening for HIV/AIDS for facility-based nurses	NDCSP,DOH	[Vertical bars]																												
88	Conduct meetings with CHCs, CHWs, and TBAs to plan BCC strategies for mothers, caregivers and men	CHWs,CHC members and TBAs,NDCSP	[Vertical bars]																												
102	Train local partners, to include CHC's, HBC, CHW to fill in OVC registers	DCSP,CHC,HBW,CHW	[Vertical bars]																												
107	Develop and implement a supervision plan for HBCVs in current and expansion areas	DHSMT,NDCSP	DHSMT,NDCSP																												
108	Train 6 tranches of existing HBCVs in counseling skills	DHSMT,NDCSP	[Vertical bars]																												
115	Conduct workshops with Diakonia for church leaders on developing HIV/AIDs programs through faith-based organizations	church ders,NDCSP,Diakonia	[Vertical bars]																												
120	Establish liaison with Dept. of Welfare and familiarize CHCs with grant application procedures	NDCSP,DSW,CHCs	NDCSP,DSW,CHCs																												
121	Train CHC on support of OVC, PLWA and how to coordinate with authorities	CHCs,NDCSP,DSW	[Vertical bars]																												
125	Based on findings of HBC Study formulate with DOH/CHCs sustainable HBC strategy	NDCSP,DOH,CHCs	NDCSP,DOH,CHCs																												
126	Develop and implement anti-stigmatization campaigns for PLWA and OVCs	DCSP,DHSMT,partners	NDCSP,DHSMT,part																												
127	Hold meetings with Departments of Home Affairs and the Department of Social Welfare regarding OVCs	MT,DHA,DSW,NDCSP	[Vertical bars]																												
134	Workshop for traditional healers on HIV/AIDS awareness and prevention	NDCSP	[Vertical bars]																												
138	<b>CDD</b>		[Timeline bar with diamond markers]																												
139	Based on BCC strategy defined by BEHAVE framework, conduct BCC activities targeted at mothers and non-maternal caregivers on CDD, recognition of danger signs, and seeking care	NDCSP,DHSMT	[Vertical bars]																												
143	Support DOH activities in campaigns against diarrheal diseases and cholera	DOH,NDCSP,CHCs	DOH,NDCSP,CHCs																												
144	BCC Training of CHCs, HBCVs, CHWs, traditional healers and TBAs with emphasis on diarrheal diseases with the 16 key family practices framework	DCSP,CHC,HBC,CHW	[Vertical bars]																												
148	<b>PCM</b>		[Timeline bar with diamond markers]																												
149	Based on BCC strategy defined by BEHAVE framework, conduct BCC activities targeted at mothers and non-maternal caregivers on Pneumonia, recognition of danger signs, and	NDCSP,DHSMT	[Vertical bars]																												
153	Conduct training on BCC for CHWs, CHCs, HBCVs, and TBAs (and other community-based partners as identified) on PCM	DCSP,CHC,HBC,CHW	[Vertical bars]																												
157	<b>EPI</b>		[Timeline bar with diamond markers]																												
158	Based on BCC strategy defined by BEHAVE framework, conduct BCC activities targeted at mothers and non-maternal caregivers on EPI, recognition of danger signs, and seeking care	NDCSP,DHSMT	[Vertical bars]																												
162	Support DOH in training on EPI	DOH,NDCSP	DOH,NDCSP																												
163	Support DOH in EPI mass campaigns (NIDs)	DOH,NDCSP	DOH,NDCSP																												
164	Work with TREE and its creches to promote appropriate use of RTH cards and adherence to EPI schedules by mothers	TREE,NDCSP,DHSMT	TREE,NDCSP,DHSM																												

